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Moo IT

Dairy farmers are milking wireless, RFID and sensor technologies to keep herds fat, happy – and profitable. PAGE 22

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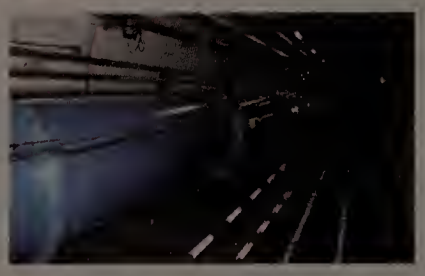

8 Data from the **Large Hadron Collider** is being analyzed by a **worldwide grid** made up of 30,000 servers. | **IT costs** from a lockup of **San Francisco's WAN** are expected to top **$1 million.**

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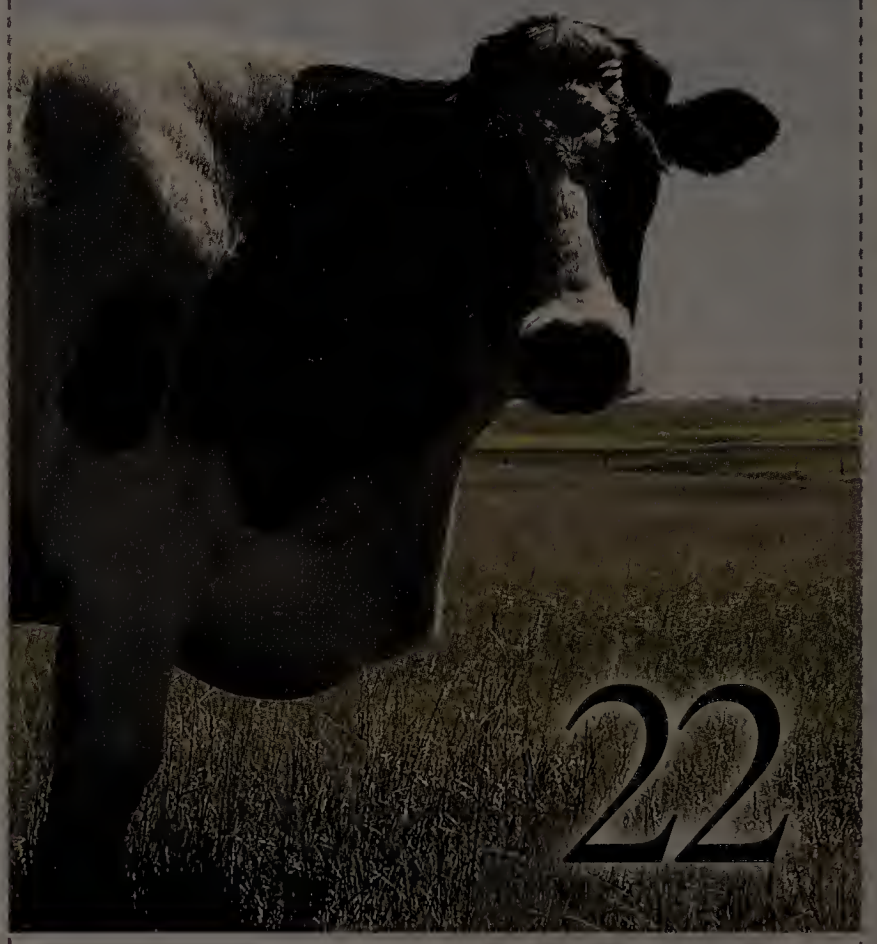

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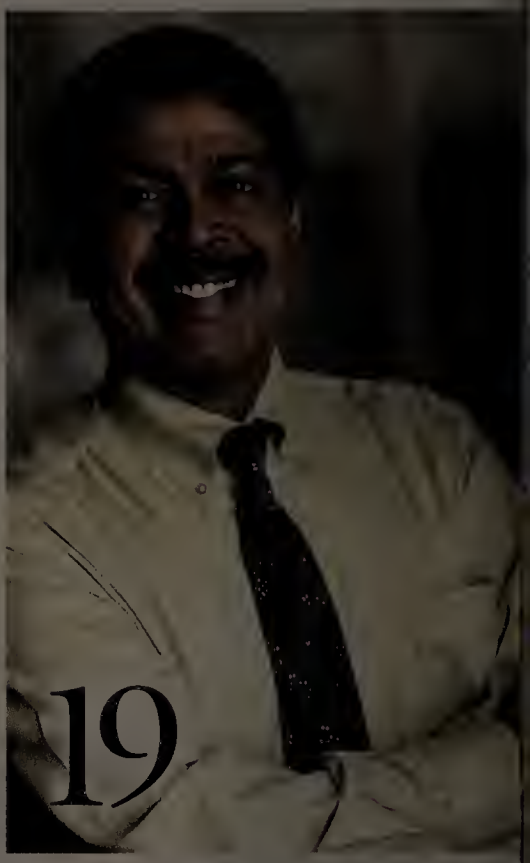

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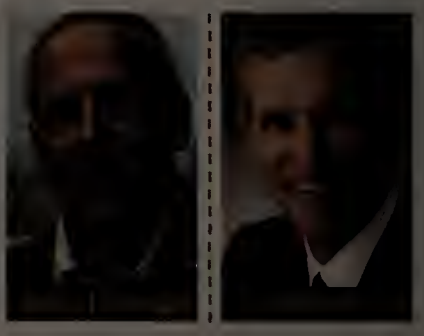

39 Shark Tank: Renovated space in a hospital is lacking a few amenities, but check out that bathroom.

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■ EDITOR'S NOTE

Don Tennant

An *it*SMF Chronicle

IT'S SUNDAY MORNING, and I'm heading to San Francisco for the Fusion '08 conference organized by the IT Service Management Forum, or *it*SMF USA. My main objective is to find out why the organization renders "IT" in lowercase italics in its acronym. I'm sure there's a really good reason for it, and I intend to find out what it is.

OK, that's not really why I'm going, which isn't to say I'm not curious about it. My mission, rather, is to moderate two extraordinarily compelling panel discussions. The topic of the first one is "Enabling Service Improvement and Governance Through Technology." The second one is titled "How to Overcome Unique ITSM Challenges Posed by a Global Organization." You hapless journalists covering Sarah Palin, eat your hearts out!

This adventure is just too good not to chronicle, so here I go.

Sunday, 9:55 a.m. EDT: I'm at Boston's Logan International Airport, where checking in at the United Airlines kiosk was a little taxing. I had to pay $40 to check my two bags (hey, I had reams of ITSM material to study), and I was deposited in Seat 33B on a completely full flight. Six hours and 20 minutes in a middle seat at the very back of the plane. Oh, well. Sometimes the really good assignments call for a little sacrifice.

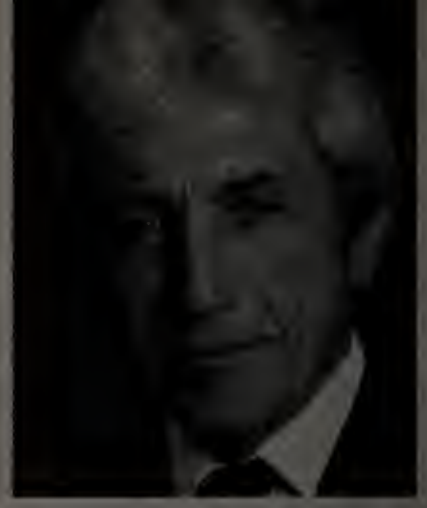
12:04 p.m. EDT: Here I sit in Seat 33B with my trusty ThinkPad, writing up my thoughts on unique ITSM implementation challenges. If the lady in 33C could see the screen, I know she'd be impressed. Unfortunately, I can't even see it. The person in 32B has his seat fully reclined, so I can only open my notebook to an angle of about 45 degrees. My elbows are pressed against my sides. I'll have to fix the typos later.

12:23 p.m. EDT: The beverage cart is here. The lady in 33C declined the offer of a beverage until she saw that I didn't have to pay for my cup of lukewarm coffee. She asked if the drinks were free, and when told they were, she requested a can of tomato juice. "Are the napkins free, too?" I asked. "Yes," the flight attendant responded. "Can I have five?" I asked, just to see what she'd do. Expressionless, she counted out five and handed them to me.

■ You hapless journalists covering Sarah Palin, eat your hearts out!

5:17 p.m. PDT: Here I am at the Moscone Center, site of Fusion '08. Registration was a bit complicated because even though my name is listed twice as a panel moderator in the program inside the nifty bag being handed out, I didn't appear on the speaker or attendee registration lists, so nobody seemed to know what to do with me. No way was I getting a badge until the mystery of my presence was solved. Service management at its best. They finally got it sorted out, so I'll get to moderate my panels after all!

Monday, 12:20 p.m. PDT:



Panel No. 1 went just fine. In the hour allotted to us, I was able to pose exactly two questions to my panel. The people in the audience did practically all the questioning, leaving me to nod occasionally and pretend I understood what they were talking about. These ITSM people are really into this stuff. It's kind of frightening.

Monday, 3:12 p.m. PDT: It seems I can't let go of the nagging question of why the "IT" in *it*SMF is in lowercase italics. So I spent the past two hours walking up to random attendees to ask them why, and how they feel about it. A couple of them looked like they were ready to reach for the pepper spray, but most of them were good sports. I'm not sure what the answer is, because the only ones who kept my attention were the ones who shrugged and said they had no idea. Whenever anyone attempted to convey a meaningful response, I found my mind drifting. I kept wondering what the flight attendant would have done if I'd asked for 10 napkins. ■

Don Tennant *is editorial director of* Computerworld *and* InfoWorld. *Contact him at don_tennant@computerworld.com, and visit his blog at* http://blogs.computerworld.com/tennant.

■ ONLINE CHATTER

RESPONSE TO:

Can Web 2.0 Save BI?

Sept. 1, 2008

If IT is scared, it's because careers have ended after taking a chance on a small vendor. The geniuses in charge still perceive IT as pure overhead. Until they understand the importance of IT and reward risk-taking, CIOs selected more for their political acumen than courage will continue purchasing software from large, established vendors.

■ **Submitted by:** *Rex*

RESPONSES TO:

Counterintuitive

Sept. 1, 2008

Here's more paradox for Frank Hayes to consider: When company loyalty is at an all-time low because of belt-tightening, corporations need IT people with knowledge of the business. Such knowledge is a result of years of experience. Those with years of experience in a corporation are the most expensive people to employ and thus targets for belt-tightening. The question for corporations is, Do you want to pay for what you want, or do you want to reduce costs?

■ **Submitted by:** *Anonymous*

Talking about paradoxes, I should mention the one about how certain technology platforms that require big teams and big budgets to implement (e.g., anything from Microsoft) gain an unfair political advantage over platforms that offer greater functionality and ROI but require smaller teams (e.g., Lotus Notes/Domino). Part of the problem is the old-school mind-set that says the guy with the most people reporting to him is the most important. Never mind actual value-add to the organization. And once money has been spent and livelihoods and reputations are on the line, it's very hard to change course, even if a change of course is obviously in the organization's best interest. Unfortunately, technology being the black art that it is, it's often not obvious to those writing the checks.

■ **Submitted by:** *Kevin Pettitt*

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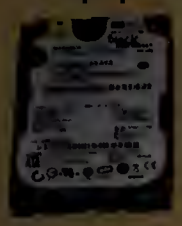
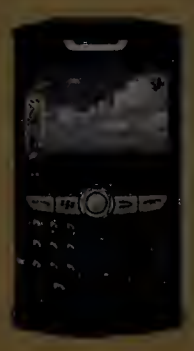
Intel's New 80GB SSD Is Faster Than the Best HDD

REVIEW: Intel's new solid-state disk drives for laptops are speedier than their fastest hard disk drive counterpart and deliver almost twice the performance of the next best SSD we've tested. Remarkably, they even match the fastest HDDs in write times.



Smart Phone Battery Life: 20 Ways to Juice It Up

Battery technology hasn't kept up with smart phones' increasing number of tricks. Try these tips to keep your phone powered up longer.



Get Leopard and Windows to Play Nice

Whether you're using Macs and PCs on the same network or running Windows and Leopard on the same system, we have advice for getting the best cross-platform experience.

Review: HP c3000 BladeSystem Enclosure

It's particularly geared for situations where there's a need for multiple servers but there isn't a designated server room with data-center-quality power.

Leading by Letting Go

OPINION: People support best what they help build, says former CIO Al Kuebler.

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News Digest

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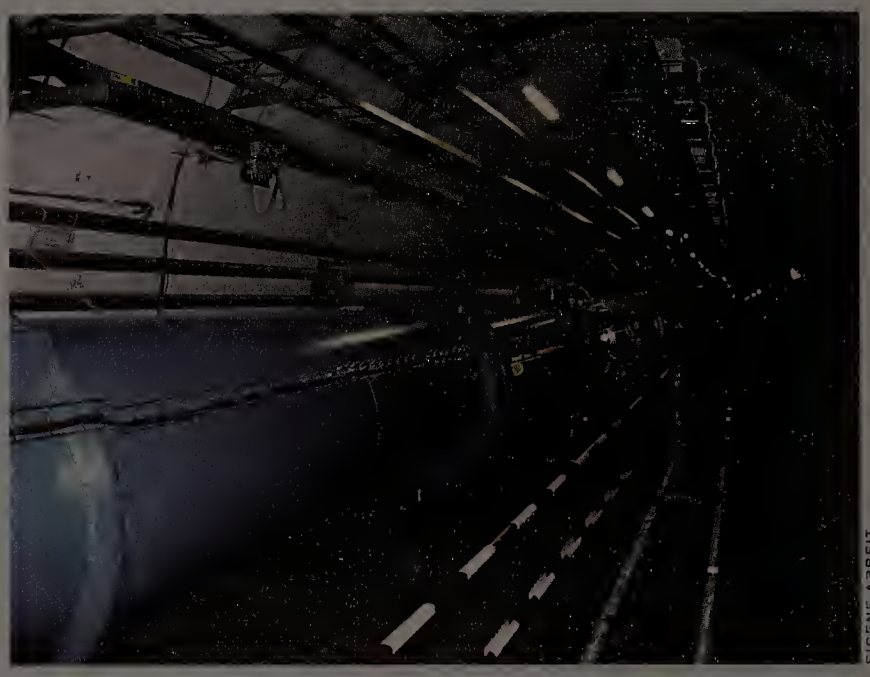
THE WEEK AHEAD

MONDAY: VMware opens its VMworld 2008 conference for virtualization users, in Las Vegas (see story, page 14).

MONDAY: Hewlett-Packard holds an analysts meeting on its enterprise IT plans, including the integration of EDS.

THURSDAY: *Computerworld*'s Green IT Symposium takes place in National Harbor, Md., outside of Washington.

THURSDAY: Oracle plans to report its Q1 financial results.



EIGENE ARBEIT

In a quest to re-create conditions after the big bang, researchers working on the Large Hadron Collider shot a beam of protons around this 17-mile, vacuum-sealed loop buried 50 to 150 meters underground.

GRID COMPUTING

Worldwide Grid Evaluating Collider Test Results

THE SUCCESSFUL test run of a massive particle collider brought scientists a step closer to finding answers to a question that has haunted people for centuries: How was the universe created?

The $9 billion Large Hadron Collider (LHC), which took some 20 years to build outside of Geneva, last week shot its first beam of protons around a 17-mile, vacuum-sealed loop buried 50 to 150 meters below the ground.

The test was a critical milestone in getting to the project's ultimate goal of shooting two particle beams toward each other at 99.9% of the speed of light. Colliding the beams will create showers of new particles that could re-create conditions in the universe just moments after the big bang that many scientists think created it.

With the test completed, the team of scientists overseeing the 111-nation effort is using a worldwide grid of servers and desktops to study the results.

Ruth Pordes, executive director of the Open Science Grid, which was created in 2005 to support the project, said that the U.S. portion of the global computer and storage grid is made up of more than 25,000 mostly Linux-based computers running 43,000 processors.

The grid's machines are housed at several universities, the U.S. Department of Energy and the National Science Foundation.

Harvey Newman, a physics professor at the California Institute of Technology in Pasadena, added that there are about 30,000 servers and more than 100,000 processor cores around the world hooked into grids that support the LHC project.

"The distributed computing model is essential to doing the computing, storage and hosting of the many petabytes of data from the experiments," he added.

Newman said that scientists last week sent one beam around the tube and, when that was complete, sent another in the opposite direction. Each beam made one circuit around the accelerator. And they both reached 99.999998% of the speed of light, he said.

The first particle collision should come in days or weeks, said Bolek Wyslouch, a physics professor at MIT, who has been working on the project for the past seven years.

— Sharon Gaudin

NETWORK SECURITY

Tab for Lockup Of City's WAN May Reach $1M

San Francisco officials estimate that IT costs stemming from a network administrator's alleged hijacking of the city's WAN will total $1 million or more.

Ron Vinson, chief administrative officer in the city's Department of Telecommunications and Information Services, said the DTIS has paid out $182,000 to Cisco contractors and $15,000 in overtime costs thus far.

Court filings say Childs may have installed a router, still not located, to give him remote access to the WAN.

An additional $800,000 has been set aside to cover other expenses, Vinson said, without elaborating.

DTIS admin Terry Childs was arrested July 12 on computer-tampering charges. Prosecutors say he reset passwords to switches and routers in the WAN, blocking other IT workers from accessing them. Childs has pleaded not guilty.

– ROBERT McMILLAN, IDG NEWS SERVICE

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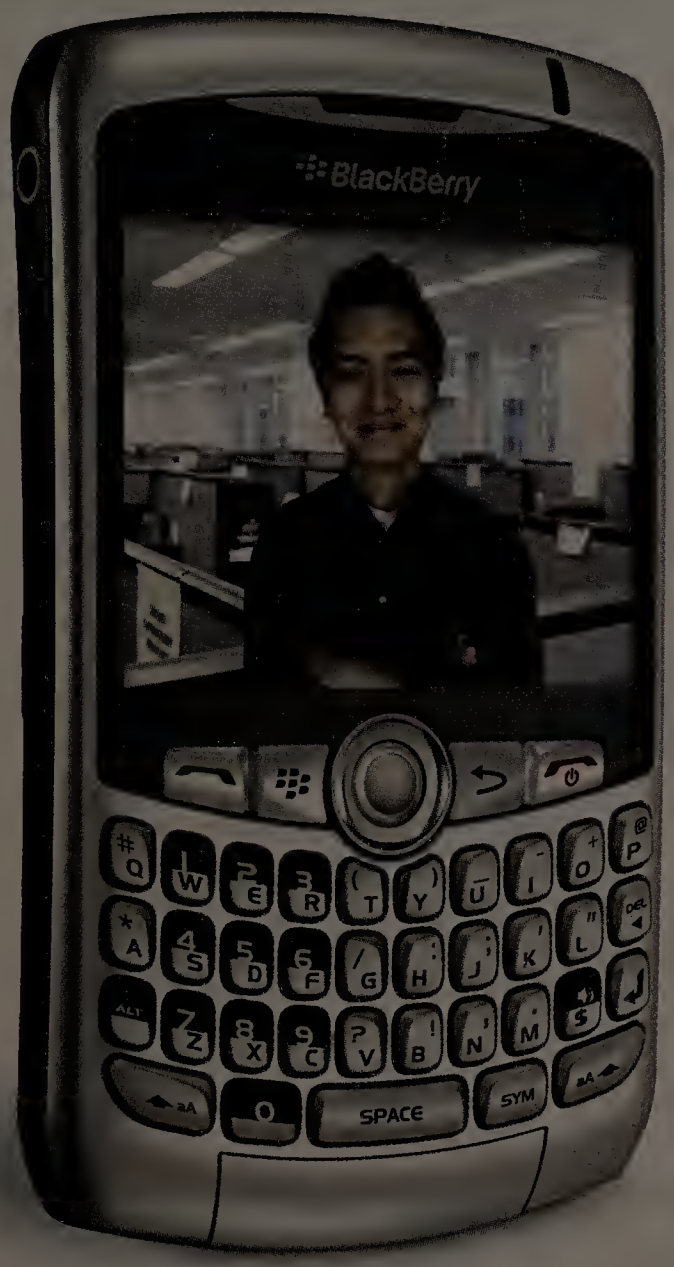

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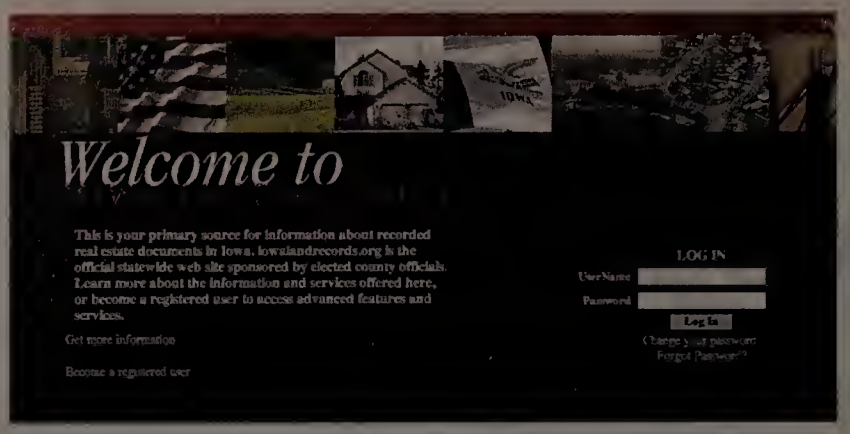


The Iowa County Recorders Association is now blocking online access to documents containing Social Security numbers.

PRIVACY

Social Security Numbers Exposed on Iowa Web Site

IN YET ANOTHER example of a data privacy controversy affecting county governments across the U.S., documents containing the Social Security numbers of Iowa residents have been posted since January 2005 on a Web site maintained by the Iowa County Recorders Association (ICRA).

Meanwhile, a resident of Pulaski County in Arkansas this month began posting internal e-mails from the county clerk's office on his Web site, in retaliation for the clerk's refusal to remove from the county's site public records containing Social Security numbers.

The Iowa case also came to light this month, after *The Des Moines Register* ran a series of stories about the availability of land records with Social Security numbers on the ICRA's IowaLandRecords.org site.

The Web site was largely inaccessible for several days after the first story was published. Phil Dunshee, project manager for IowaLandRecords.org, said that the site was overwhelmed by traffic, forcing the server that it runs on to be taken down for maintenance.

The ICRA said Sept. 3 that it would block access to mortgage documents and Uniform Commercial Code financing statements. Dunshee noted that once the site was back up, users would be able to view a document index but not the full images.

However, Joyce Jensen, chairwoman of the site's governing board, said businesses in Iowa need to eventually have online access to the land records restored.

A state law barring Social Security numbers from being listed in public records took effect in January 2003. But many of the documents on the ICRA's site date from before then. Dunshee said he was preparing an estimate of the scope and cost of a project to redact all the Social Security numbers.

In Arkansas, Pulaski County Clerk Pat O'Brien said the circuit county records containing Social Security numbers and other personal data were posted online in accordance with state laws. He added that he doesn't care about the posting of internal e-mails from his office by North Little Rock resident Bill Phillips, since the e-mails are also considered public records.

— Jaikumar Vijayan

Short Takes

CEO St[illegible] and 12 other A[illegible] executives have agreed to pay $14 million, plus nearly $8.9 million in attorney fees, to settle a lawsuit filed by shareholders that alleged the company was harmed by its backdating of stock options.

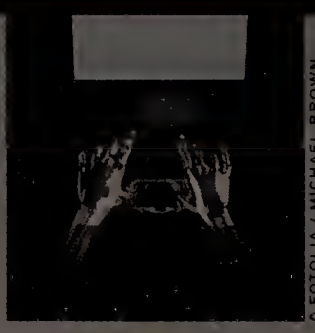
Micro[illegible] has released patches for eight bugs in various products, including "critical" flaws in the [illegible] desktop operating system. The update fixes five bugs in the Graphics Device Interface+ software and a flaw in Microsoft Office.

The C[illegible] S[illegible] plans to release guidelines for measuring the state of IT security efforts. The nonprofit group also launched a service to help companies compare their security performance with similar firms'.

Lenovo [illegible] has halted online sales of Linux-based desktop and laptop computers after failing to meet sales expectations. The company plans to continue direct sales of the systems.

INTERNET

Google Bends to Privacy Critics on Chrome Tool



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REACTING TO criticism that its new Chrome browser was essentially acting as a keylogger, Google Inc. last week said it would render data anonymous within 24 hours of collecting information from the browser.

Google had been taking heat from privacy advocates over the Google Suggest feature in Omnibox, Chrome's combination address and search bar. Suggest automatically lists related search queries and popular Web destinations based on the text typed by users.

To do so, the feature transmits keystrokes to Google's servers. The vast majority are deleted as soon as suggestions are returned, but about 2% are recorded, along with associated data such as the IP addresses of the user. Google says it needs the information to monitor and improve Suggest.

But Urs Hölzle, the company's senior vice president of operations, said in a blog post that given the concerns and the data's "limited potential use," Google plans to start anonymizing it "within about 24 hours" of receiving it. That is as quickly as is practical, he said.

Suggest began rolling out to Google's search engine late last month; before that, it was used as part of the Google Toolbar.

But what sparked the criticism over its use in Chrome was Omnibox's everything-in-one-place nature, said Alissa Cooper, chief computer scientist at the Center for Democracy and Technology in Washington. "Users were faced with Google retaining all of their search logs and all of the URLs they were typing," she said.

– GREGG KEIZER

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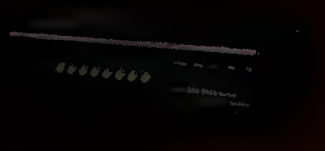

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INTERNET

Big Advertisers Protest Google-Yahoo Search Deal

THE ASSOCIATION of National Advertisers has called on the U.S. Department of Justice to reject a planned point search advertising program by Google Inc. and Yahoo Inc.

The New York-based trade group — which represents 400 companies that spend more than $100 billion annually on advertising — said "a Google-Yahoo partnership would control 90% of national search advertising inventory."

Under the proposed four-year deal announced in June, advertisers would pay Google for ads that appear with Yahoo search results, and then Google would pay a portion of the proceeds to Yahoo. Yahoo estimated that the deal would generate $250 million to $450 million during its first 12 months, and up to $800 million annually thereafter.

In a note posted on the ANA Web site, President and CEO Bob Liodice said his group is concerned "that the partnership will likely diminish competition, increase concentration of market power, limit choices and potentially raise prices for high quality, affordable" search ads.

Although Yahoo and Google contended that the deal doesn't need regulatory approval, they did agree to delay its implementation for three and a half months after the June 12 announcement so the Justice Department could review its terms.

Internet marketing consultant Andy Beal, said in a blog post that Google and Yahoo are likely surprised at the advertising group's opposition to the deal. The clout of the ANA membership could easily affect the DOJ's decision, he noted.

"Google and Yahoo were prepared for some opposition to the deal — hence agreeing to give regulators 100 days to review the deal — but they probably weren't expecting such stout opposition," Beal said.

Both Yahoo and Google directed reporters to Web sites containing news stories with information on advertisers that support the deal.

— Heather Havenstein

BETWEEN THE LINES *By John Klossner*

In their first jointly developed offering since signing a partnership deal in late 2006, Microsoft Corp. and Novell Inc. said they have optimized Novell's SUSE Linux to run as a guest operating system on Windows Server 2008 machines.

Microsoft released its first update to Dynamics CRM Online, a set of hosted apps that it launched in April.

ONE YEAR AGO. The SCO Group Inc. filed for Chapter 11 bankruptcy protection, a month after a federal judge ruled that the copyrights to Unix are owned by Novell, not SCO, as it had claimed.

Global Dispatches

U.K. Proposes Quotas for Foreign IT Workers

LONDON – The U.K. Migration Advisory Committee last week proposed strict controls on the number of IT workers from outside the European Union allowed into the country.

Liam Byrne, the U.K.'s minister of state for nationality, citizenship and immigration, said that the decision "means [that] only migrants with the skills Britain needs can come – and no more."

Iain Smith, founder of Diaz Research Ltd., an IT human resources consulting firm here, said the decision could force U.K. companies to increase the use of offshore software developers, which could leave the country with an internal shortage of software developers.

Leo King,
Computerworld U.K.

London Exchange Trading Halted

LONDON – The London Stock Exchange blamed connectivity problems for a breakdown that halted trading for most of last Monday. The shutdown came on what was expected to be one of the busiest trading days of the year because of the U.S. government's takeover of mortgage groups Freddie Mac and Fannie Mae.

Exchange officials declined to disclose the specific cause of the problem, but they contended that it was not related to the flagship TradElect trading platform.

The problem came in the midst of an upgrade of the TradElect system to bolster its capacity and latency.

Trading returned to normal when the exchange opened on Tuesday morning.

Mike Simons,
Computerworld U.K.

BRIEFLY NOTED

A Malaysian man last week was sentenced to two years in prison on a conspiracy charge in connection with an international fraud scheme to manipulate stock prices by hacking into U.S. online brokerage accounts. The U.S. Department of Justice said that Thirugnanam Ramanathan, 35, was also fined $362,247 (U.S.).

Grant Gross,
IDG News Service

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SERVER

Virtualization Vendors Step Into the Ring in Vegas

VMware invites its rivals to show off their products at its user conference. This year, Microsoft and Citrix will finally be packing a serious virtualization punch.

By Patrick Thibodeau

VMWARE INC. expects 14,000 attendees at its annual user conference in Las Vegas this week, including workers from more than 200 trade-show exhibitors. That's a 30% increase over last year's attendance — clear evidence of VMware's influence. But VMworld 2008 will also be the focal point for the gathering storm of competition that the virtualization market leader faces.

Among the companies fighting for users at the conference will be the first serious challengers to VMware's dominance of server virtualization. That includes Microsoft Corp., which released its Hyper-V virtualization hypervisor in June, and Citrix Systems Inc., which today plans to announce a new version of the XenServer software that it acquired last year.

VMware has let competitors set up booths at its shows since the first VMworld in 2004, but it still controls the conference agenda. One scheduled presenter, Simon Crosby, Citrix's chief technology officer, said his slides had "to be vetted by the censors" — a reference to VMware. He added that his talk was "carefully arranged" by VMware to take place in the afternoon on Thursday, the last day of the conference.

Indeed, VMware continues to set the agenda for the entire virtualization market. Rivals and hardware vendors alike have timed product announcements to coincide with VMworld. In addition to Citrix's scheduled rollout, Microsoft last Monday said it would ship a free stand-alone version of Hyper-V and an upgrade of

Continued on page 16

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ALTERNATIVE THINKING ABOUT SERVICE MANAGEMENT:

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Not Just Business Aligned.

09.22.08

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Continued from page 14
its virtualization management tool within 30 days.

And on Wednesday, Sun Microsystems Inc. — which will also have a booth at VMworld — formally announced its first virtualization offering that supports multiple operating systems.

Also last week, Dell Inc. added two blade servers geared toward virtualization. And Hewlett-Packard Co., which announced a set of virtualization-oriented products two weeks ago, will unveil more offerings today, including a server based on a six-core Xeon processor that Intel Corp. is announcing in conjunction with VMworld.

As competition has picked up, though, VMware has lost its ability to control one important thing: pricing.

In July, VMware made its low-end ESXi hypervisor available free of charge. Then last month, it adopted a new pricing scheme for its Lab Manager tool for developers, lowering the starting price for deployments from about $16,000 to between $2,000 and $4,000.

Users are taking advantage of the new era of free hypervisors and reduced pricing for the software layered on top of them.

Kevin Sonney, IT manager at iFloor Inc., a flooring retailer in Tukwila, Wash., said if VMware's executives were standing in front of him, his message would be to "stay price-competitive" with Microsoft.

Sonney, who has virtualized his Exchange environment with VMware's software, said he "definitely" plans to test Hyper-V. Cost will play a big role in any decision to switch, although Microsoft's technology has to prove itself as well. "I don't think I would want a cheaper solution if [a server] is going to go down more often," Sonney said.

For Matt Lavellee, director of technology at MLS Property Information Network Inc. in Shrewsbury, Mass., the savings from using the version of Hyper-V built into Windows Server 2008 were an overwhelming advantage for Microsoft over VMware.

Lavellee said VMware's software would have accounted for 30% of the real estate listing service's overall IT infrastructure expenses. "Cost is such a driver that unless Hyper-V didn't work, we weren't going to look at VMware," he said.

DANGEROUS TIMES

These are dangerous times for VMware — a fact that it acknowledged in July, when it ousted CEO Diane Greene — a collegial, research-oriented leader who was one of its co-founders — and replaced her with onetime Microsoft executive Paul Maritz. In his first press conference, Maritz touted his inside knowledge of Microsoft's battle tactics and said he knew how to defeat the software giant.

Maritz announced the ESXi giveaway during that same conference call. His appointment and the subsequent pricing moves by both VMware and Microsoft suggest that the competition for virtualization users may mirror the blunt-force browser wars between Microsoft and Netscape in the late 1990s.

For now, VMware's technology still gives it an edge. Rachel Chalmers, an analyst at The 451 Group, said that tools such as VMotion, which lets users do live migrations of virtual machines from one physical server to another, put VMware "in a very strong position."

But rival products are improving. For instance, Citrix's new XenServer 5.0 includes the ability to boot and run a virtual machine on a bare-metal server without a hypervisor, potentially eliminating the performance concerns that often keep IT managers from running mission-critical applications in virtualized environments.

XenServer 5.0 can also manage virtual servers based on Hyper-V and VMware's software. Microsoft's new virtualization management tool will be able to control VMware-based servers as well, and Microsoft last week demoed a live-migration feature that's scheduled to be included in the next release of Hyper-V.

Most vendors won't allow direct rivals to exhibit at their own conferences. But Karthik Rau, vice president of marketing at VMware, said the company wants VMworld attendees to get a comprehensive view of virtualization technology. VMware is confident that users will continue to choose its products, Rau added.

Brian Trudeau, CIO at Amerex Brokers LLC in Houston, will be at VMworld this week. He remembered scratching his head a year ago over VMware's decision to allow XenServer to be displayed on the trade show floor. But he welcomed VMware's open approach and thinks that the heightened competition will help drive innovation and reduce costs.

Allowing rivals to take part in VMworld "is kind of a gutsy move on their part," Trudeau said. He added that he isn't worried about VMware's prospects, because the company has "the advantage of experience" over its competitors. ■

Eric Lai *contributed to this story.*

Puts Its Head In the Cloud

It may be no coincidence that Google Inc. released its Chrome browser just two weeks before VMworld. At the very least, it certainly was good timing.

Chrome is designed to be the front end for Web applications that can be delivered to a variety of client devices. Microsoft may be going after VMware's market share with Hyper-V, but Google and other members of the cloud computing crowd are trying to take over the desktop – in part, with the help of virtualization technology.

Steve Davidek, an IT manager for Sparks, Nev., who runs VMware-based virtual servers, said he's now seriously looking at desktop virtualization. It's also a top issue within Connect, an independent Hewlett-Packard user group with about 50,000 members, said Davidek, who serves on the organization's board of directors.

The economics of desktop virtualization are compelling, according to Davidek. He said a server-based virtualization approach would let Sparks extend the life of its PCs and then move to lower-cost thin clients later on. That could halve the city's overall desktop costs, he added.

But Microsoft itself offers desktop and application virtualization technologies – and even some VMware customers are turning to those products.

For instance, Heidelberger Druckmaschinen AG rolled out VMware's software at the server level four years ago. But the Germany-based maker of printing presses is primarily a Microsoft and SAP shop. And CIO Michael Neff said it used Microsoft's Application Virtualization, or App-V, software to reduce the total number of applications installed on its PCs from 21,000 to 500.

Microsoft

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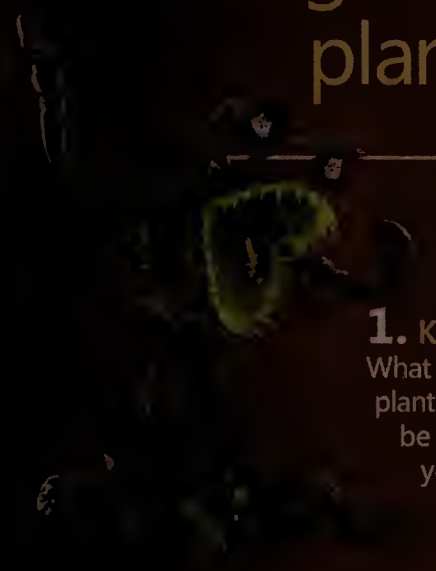

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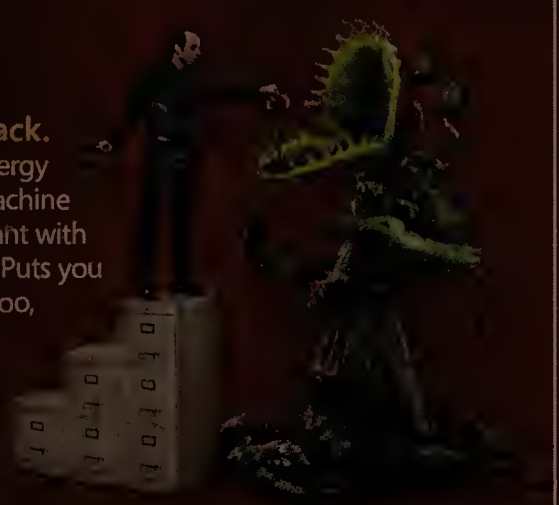

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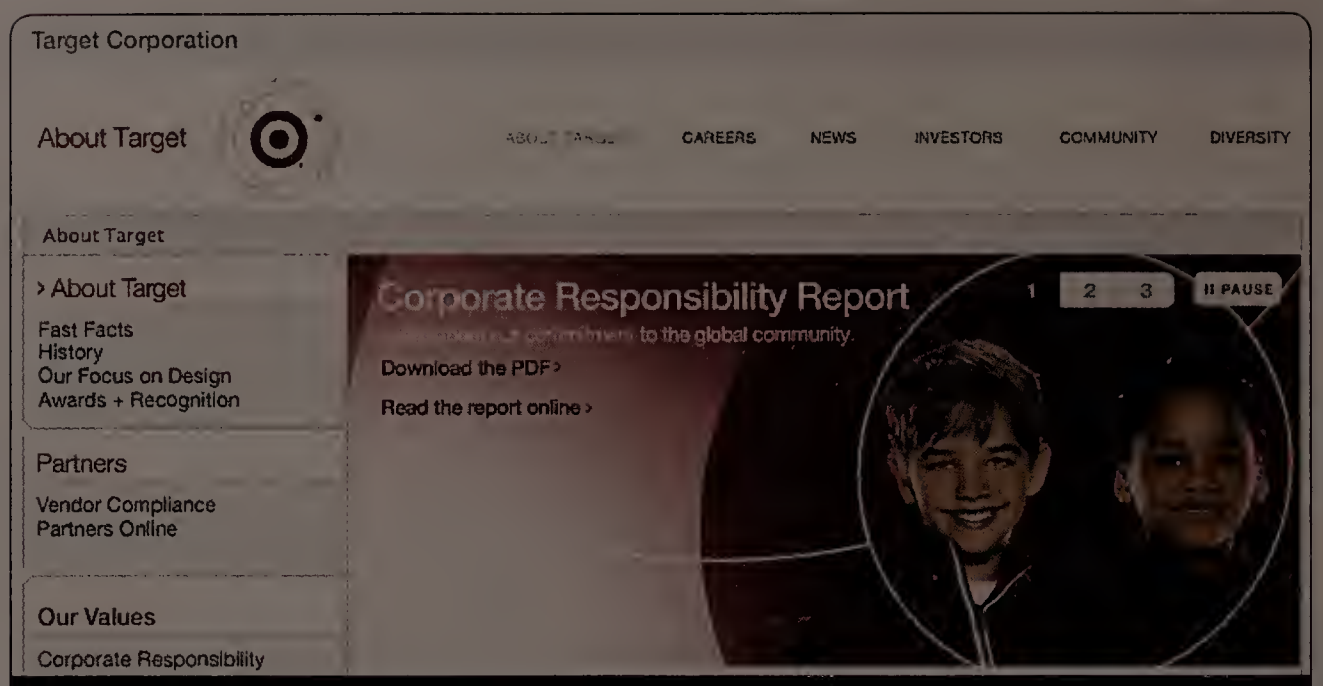


Target has agreed to redesign its Web site in order to make it more accessible to blind customers.

Target Pact Won't Lead to Web Access Standards

Legal experts do expect that the settlement will prompt upgrades of many retail sites.

By Heather Havenstein

THE SETTLEMENT signed last month by Target Corp. to resolve a class-action lawsuit charging that its Web site isn't fully accessible by blind persons won't become the basis for online-accessibility standards, said the National Retail Federation.

A spokesman for the Washington-based trade association, which represents more than 1.6 million U.S. retailers, said that a broad spectrum of retail companies and trade groups would have to be included in any standards discussions.

"For standards to really work, they can't be dictated by a single entity," said spokesman Scott Krugman.

"They need to be put together as a collaborative process with all interested parties; standards also need to have flexibility," he added. "There are so many different retailers with so many different levels of sophistication with their Web sites, it is very difficult to force standards this prematurely."

The agreement signed by Target settled a 2006 class-action lawsuit filed in federal court in San Francisco by the California chapter of the National Federation of the Blind (NFB) and several individuals.

The suit claimed that the retailer's Web site violated state and federal laws prohibiting discrimination against people with disabilities.

As part of the settlement, announced on Aug. 27, Minneapolis-based Target is creating a $6 million fund against which plaintiffs can make claims. The retailer also agreed to update its Web site so that blind users running screen-reader software have access to the same features all other users do, and to let NFB personnel regularly test those improvements once they are completed early next year.

The settlement also requires Target to hold periodic training sessions for its internal Web developers, and to provide federation officials with a quarterly summary of complaints received about accessibility.

Target has already made "significant enhancements" to improve the accessibility of its Web site, said Steve Eastman, president of the retailer's Target.com unit, in a statement. He added that Target is working with the NFB to further refine its site.

Krugman said that the pace of technological change makes it difficult for many retailers to offer the latest innovations for disabled people on their Web sites.

"In a lot of cases, retailers are moving as fast as the technology is allowing them to," he said. "The [reader] technology is more advanced than the Web sites themselves. Retailers are certainly not looking to alienate their customer base."

Some legal experts said that the case may serve to expand the scope of how state and federal disability laws affect Web sites.

H. Scott Leviant, an attorney who handles class-action lawsuits and writes The Complex Litigator blog, said he believes that the Target settlement will prompt many retail companies to improve online accessibility.

The settlement should help bring "into focus" the question of how the Americans with Disabilities Act applies to Web sites and should convince retailers to move quickly to help users, Leviant said in a blog post.

He called on online retailers to move quickly to enable visually impaired persons to more easily access their sites.

Even before the settlement, some companies had decided to make changes to avoid litigation and "probably to foster more goodwill with consumers," Leviant said. "Following Target's settlement, I think it is likely that online retailers can expect a rapid surge in litigation of this type."

Marc Maurer, president of the NFB, called the Target settlement a positive development for all blind customers. And, he said in a statement, "it is our sincere hope that other businesses providing goods and services over the Internet will follow Target's example." ■

■ THE GRILL

Kishore Swaminathan

Accenture's **chief scientist** talks about **redefining** the CIO's territory, **restructuring** IT's role and **bringing consumer power** to corporations.

Dossier

NAME: Kishore Swaminathan

TITLE: Chief scientist

ORGANIZATION: Accenture Ltd.

LOCATION: Chicago

FAVORITE TECHNOLOGIES: Electricity, running water and the Internet

FAVORITE NONWORK PASTIME: "Traveling to new places where I don't know the language, culture or people."

IN HIGH SCHOOL, HE WAS: "Reckless and abrasive but fortunate to have great mentors."

PHILOSOPHY IN A NUTSHELL: "Ignore current reality. Be resilient."

FIRST JOB: Summer intern for the two founders of Infosys.

DREAM JOB: "My current job."

LAST BOOK READ: *Life of Pi*, by Yann Martel

ROLE MODEL: "Absolutely nobody."

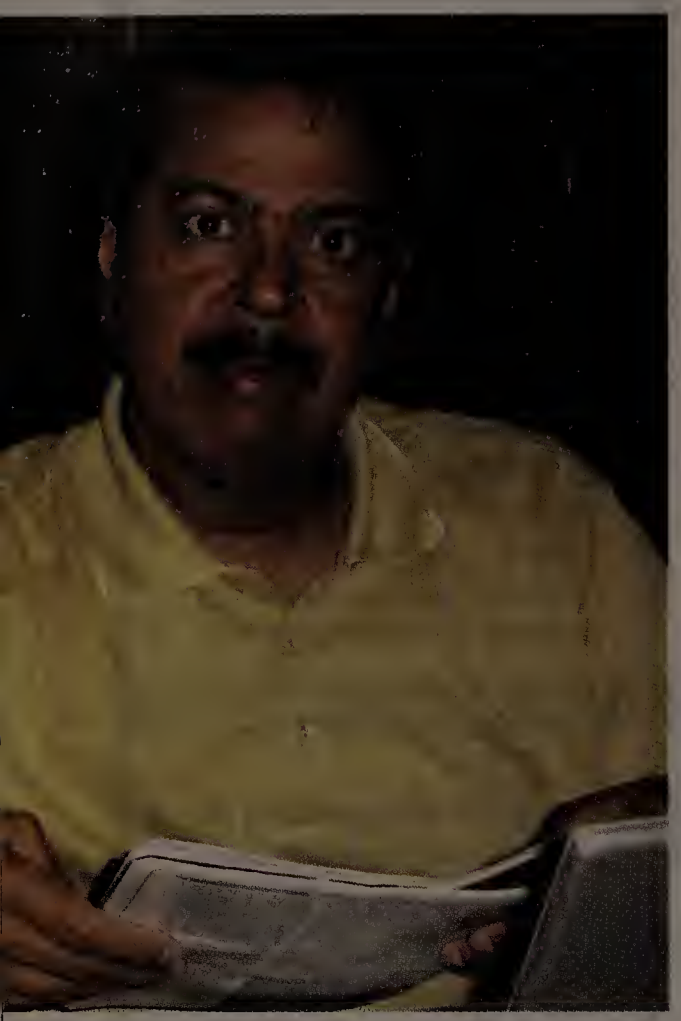
Accenture chief scientist Kishore Swaminathan envisions the advent of a new corporate IT department. It includes a continual shift away from building and maintaining enterprise applications and a new role for IT executives as chief intelligence officers. This new breed of IT executive will develop and oversee how companies collect, store, combine, share, analyze and capitalize on their most valuable corporate asset — huge volumes of data.

What's driving this shift you foresee?

Some of the drivers are well known, such as the increasing cost of maintaining legacy systems. As much as 50% of IT budgets is spent maintaining legacy systems and maintaining infrastructure.

There's also a recognition that a lot of things that companies and CIOs used to have to do are not value-added.

As we keep hearing more and more about things like Web 2.0 and how teenagers are using Facebook, companies are asking, "How can it be that the use of the same technology [that] is so empowering to the individual is so stra-



For CIOs to move up the curve, they have to get rid of things they're currently doing so they can focus on bringing the same power IT has in the consumer space to the corporate space.

tegically unimportant to a company?"

IT has been revolutionary for individuals. They can work from anywhere, access information from anywhere, build social groups and publish for free. Meanwhile, the value of IT for corporations is always under debate. Such a mismatch is not sustainable in the long run.

Are changes happening already? Employees have Gmail accounts because their company mailboxes are too small for even company-related video. People are using Facebook to do company-related collaboration because it's easier. This is stepping into CIOs' territory.

Should CIOs be redefining their territory? The role of IT in most large companies got defined by Y2k, the recession that followed the dot-com bust and Sarbanes-Oxley. All three defined the role of IT and the job of the CIO as one of standardization and control — minimizing risks and reducing costs.

But CIOs and business folks are seeing that IT is a terrible thing to waste. They have to go from using technology for standardization and risk minimization to using IT for reward maximization. They're seeing that happen in the consumer space and should be trying to reap the same benefits.

How? Eliminate what you do not have to do [internally]. Three to four years ago, CIOs had no option except to run a data center, no option but to run hardware and software internally. The one very important trend now is cloud computing — hardware clouds, software clouds and process clouds.

Cloud computing basically enables the CIO to get rid of non-value-added, nondifferentiating things, starting with hardware infrastructure, followed by commodity software infrastructure, followed by desktop applications, which are now offered by Google.

So, what's left? The data. When you adopt a cloud [IT architecture], the data lives in different places across the Internet. You have to almost completely rethink how you manage and govern data that lives in multiple places. IT has to define the data governance policy and build a port around the data to keep it clean. IT, as the data port commander, ensures privacy and security and deals with compliance issues related to data.

And the CIO? The CIO used to be the chief infrastructure officer. If not infrastructure officers, they were applications officers. Now they have to take control of data and evolve into the chief intelligence officer.

Basically, the argument that I'm making is that for CIOs to move up the curve, they have to get rid of things they're currently doing so they can focus on bringing the same power IT has in the consumer space to the corporate space. If, for example, a CIO can standardize a mashup development environment and make data from back-end systems easily available, they empower the end user to build the applications they need.

What do you see as the key technologies on the horizon? One is the emergence of a new protocol called REST [Representational State Transfer]. Like SOAP, it's a way of getting data out of back-end systems. SOA is based on SOAP. But SOAP is so complex, you would use it only for extremely secure, long-running transactions.

REST makes it much easier for companies to publish data and for mashups to pick up that data. REST is important [because] in the last 12 months, all of the big online companies, including Google and Yahoo, have thrown their weight behind it as a way of publishing data.

Also important are widgets, which enable people to create a simple user interface. This combination of REST as a simple way to get data, mashups as a way to gather and mix data, and widgets as the interface is going to be powerful.

What skills do corporate IT departments need to make this vision a reality? Skills will aggregate around data, data semantics, how to use unstructured information from the public domain. Skills are going to be around data architecture more than system architecture. The ability to analyze data — and the people who have pattern-recognition skills — will become more and more valuable in IT departments.

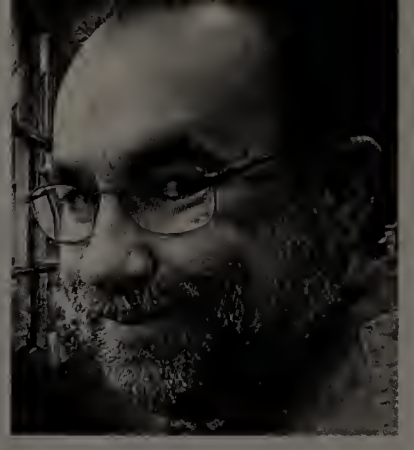
Today, the CIO commands a group of programmers, and the business comes to IT asking them to build applications. That situation will change to where the new chief intelligence officer — which could be multiple people — commands a group of business analysts and quantitative gurus and people with machine learning, operations, research and data architecture skills. The business will come with a request for them to architect their data or to find profiles within their data, such as the most loyal customers. The value-add the IT department will provide is not an ERP system, but intelligence that exists in data and that requires very complex skills to find.

— *Interview by* **Julia King**

■ OPINION

Steven J. Vaughan-Nichols

Why Chrome Won't Rule the World (Yet)



I LIKE GOOGLE'S new Chrome Web browser a lot — as in, I think it's going to change the desktop world in a way we haven't seen since Marc Andreessen and Eric Bina released the first modern Web browser, Mosaic, back in 1993.

What Chrome brings to the table are behind-the-scenes features like V8, a killer multithreaded JavaScript virtual machine. V8 compiles JavaScript code directly into machine code instead of interpreting it as most JVMs do. The result is that Web-based applications written in JavaScript — like, say, Google Gmail, Google Docs and Google Maps — run much, much faster than they do on other browsers.

How much faster? I put Chrome, Firefox 3, Safari 3.1.2 and Internet Explorer 7 on the SunSpider JavaScript benchmark racetrack, and this is what I found: Chrome won, running away with a mark of 1,975.0 milliseconds. Firefox 3.0 came in second, with 3,125.2 msec. Safari, which uses WebKit, the same open-source browser engine as Chrome, took third, with 4,006.8 msec. And IE — oh, the shame! It came in dead last, with a mark of 32,221.4 msec.

Fast enough for you?

Chrome also runs JavaScript programs with multiple processes. The short explanation of why this is good is that each browser tab can run its own JavaScript program. That way, if a program freezes up, it doesn't stop the rest of the applications or the browser. They continue on as normal. Compare that with your usual run-of-the-mill browsers. With them, if one JavaScript program goes blooey, everything comes to an abrupt halt.

Put this and Chrome's other improvements together, and what you have isn't a browser anymore. It's an application platform. Some are saying it's a direct challenge to Windows. It's not. But it is one giant step toward making Web-based applications — especially Google apps, naturally — a real threat to Microsoft Office.

■ Chrome is one giant step toward making Web-based apps a real threat to Microsoft Office.

Combine this with other trends, and I can easily see millions of people using cheap PCs powered by desktop Linux and connecting to Google applications with Chrome as their interface. Why pay for Windows and Office when you can get all they can do for next to nothing?

Chrome, however, is not ready to take over the desktop world quite yet.

The browser still has security problems. I'm not sure there will ever be a Web browser without security troubles, but Chrome seems to have more than I would have expected. Of course, it has been in the workshop for over two years, and this is its first visit to the real world. In addition, Chrome is open source, and security bugs tend to get squashed faster in open-source projects.

Chrome also uses more memory than I expected, especially since Google says it has been trying hard to get rid of memory leaks. I'm not sure, though, that what I've seen is the whole story. Chrome was designed to be better at managing memory after it has been running for a long time with multiple applications. In other words, it was meant to perform best in real-world conditions. In any case, it's a beta program. Beta programs always use more memory than final releases.

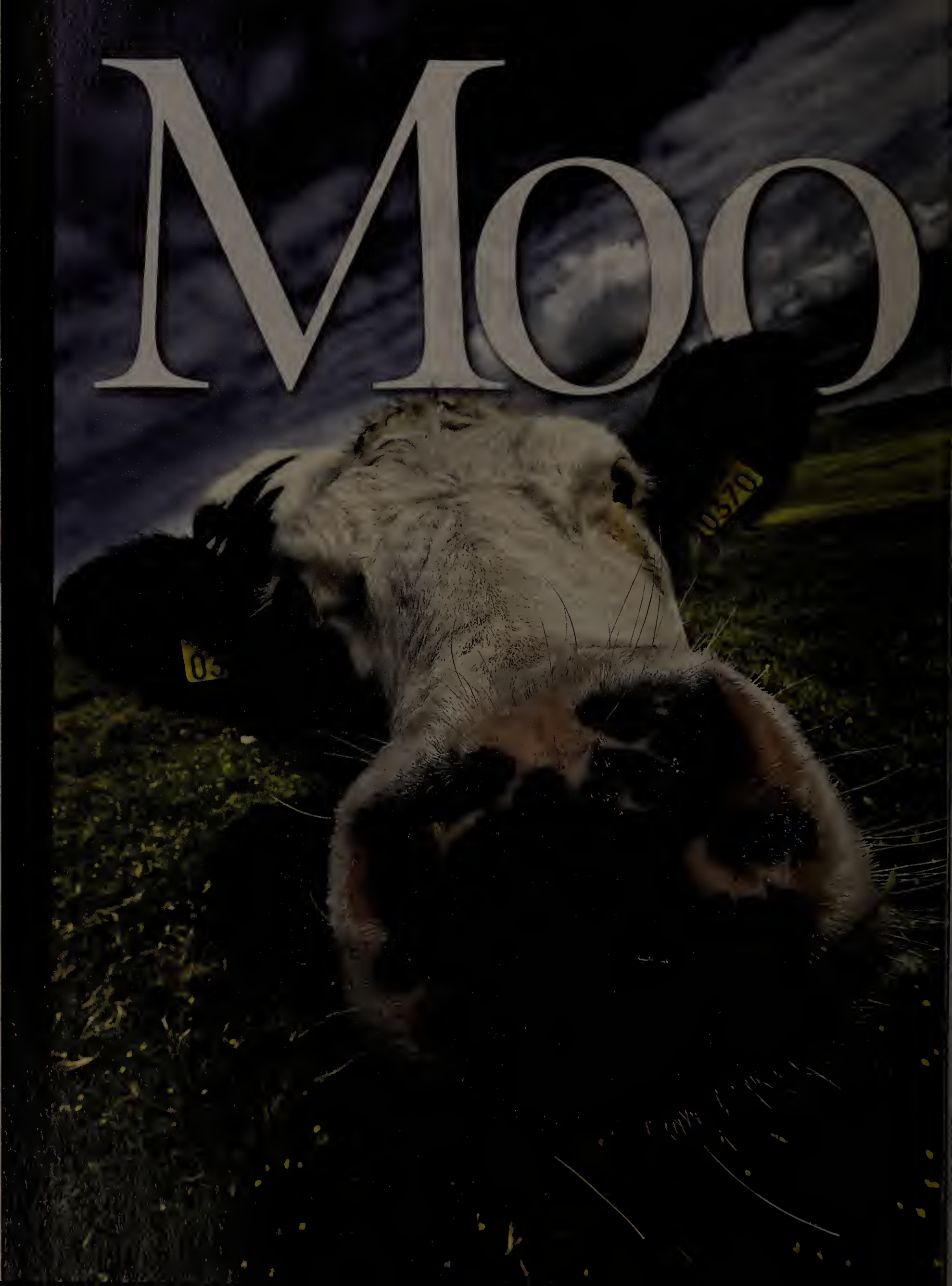
So, is Chrome ready to topple the desktop world and replace it with one where applications live on the Web? No, not yet. But that world is coming.

I'm quite serious. It may not be Chrome itself that ushers in that world; it may be Firefox with Chrome's goodness baked in. (Hey, it's open source; you can do things like that.) But I have no doubt that the PC-centric world we've grown to think of as normal since the 1980s is about to change to one where PC- and Web-based applications are equally important.

Where does Microsoft fit into that world? Ballmer and company are in deep, deep trouble. ■

Steven J. Vaughan-Nichols *has been writing about technology and the business of technology since CP/M-80 was cutting edge and 300bit/sec. was a fast Internet connection — and we liked it! He can be reached at sjvn@vnal.com.*

Moo



IT

Dairy farmers are milking wireless, RFID and sensor technologies to keep herds fat, happy and profitable.

By Robert L. Mitchell

WHEN retailing giant Wal-Mart Stores Inc. began its push to integrate state-of-the-art radio frequency identification technology into its supply chain four years ago, the world took notice. But one industry might have greeted the announcement with a collective ho-hum. Dairy farms, which began using computerized record management systems in the 1950s, have been using electronic smart tags and sensors to manage dairy herds since the early '80s.

Since 1991, the number of dairy farms in the U.S. has dropped by more than half, to 75,140, and the remaining farms are getting bigger. As dairy farms consolidate and expand, they are increasingly relying on a range of IT systems, sensors and wireless technologies to support that growth.

Dairy operations use technology to help improve health, breeding and milk production. The result: Milk output per cow has increased by about 15% over that same period, according to the U.S. Department of Agriculture.

"As you get bigger, having information at your fingertips is a lot more valuable," says Mary Wilson, president of Thomas Farms of Garland Maine Inc., which manages about 420 dairy cows. And in a capital-intensive business with tight margins, small increases in productivity can make a big difference.

Dairy farm operators now use communications technologies such as wired Ethernet, Bluetooth, Wi-Fi and RFID. IP video cameras monitor animals in the barns. Biometric sensors include pedometers that measure each cow's activity level, and emerging temperature-sensor technologies that detect reproductive heat cycles and early signs of illness. Computerized systems in the barns, in the back office, at feed-mixing stations and in the milking parlors are now integrated and centralized around ISO-standard passive RFID tags, each with a unique, USDA-approved 15-digit identifier.

"These systems provide a means for ongoing, real-time monitoring of the performance of the business, right down to the individual cows," says Terry Smith, president and CEO of Dairy Strategies LLC, a consultancy in Bruce, Wis.

Overall, about one in five dairy operations uses on-farm computers, according to the USDA — a growth rate of about 14% since 1991 — and penetration is much higher in large farms, say dairy system vendors.

COW TAGGING

RFID tags were used on about 9% of dairy cows in 2007, according to the USDA, but adoption is increasing rapidly. The reason: At $2 to $3 per tag, RFID systems are just beginning to replace proprietary transponder tags that can cost more than 20 times that. But if the advent of inexpensive, industry-standard RFID tags and readers has dramatically cut costs for dairy herd identification

Continued on page 26

Farm Facts

Percentage of dairy farms that use on-farm computers:	19.4%
Percentage of dairy farms that use off-farm computers:	4.9%
Increase in use of on-farm computers, 1991-2007:	13.7%

SOURCE: U.S. DEPARTMENT OF AGRICULTURE

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RFID: One Cow At a Time

ALTHOUGH RFID is helping to make dairy farms more productive, there's another reason the USDA could mandate ear-mounted RFID tags with unique 15-digit identifiers: to secure the nation's milk supply.

"Today, milk from one farm is mixed with other farms' milk at the dairy," and it's impossible to track, says Dr. Jim Reynolds, a clinician at the School of Veterinary Medicine at the University of California, Davis. "If you wanted to cause trouble, by adulterating one tank [of milk], you'd cause a lot of trouble."

Interest in tracking milk from a dairy farm to the grocery store peaked after the 9/11 attacks but waned over time. "The food security thing just sort of dropped off the radar," Reynolds says.

But Tom Sarosy, manager of Fair Oaks Dairy Farm in Fair Oaks, Ind., says he thinks increased security is inevitable. He envisions a world where milking parlors require security card access, every load of milk is coded, and truck routes to the processing plant are carefully tracked. "I think it's sad, but I think it will happen," he says.

– ROBERT L. MITCHELL

BY SANDRA GITTLEN

The Business Value of Wireless Integration

A unified-based approach takes the fuss out of desktop and mobile voice while offering productivity, cost and management gains.

Consider this: A high-end hotel resort wanted its staff to be able to contact one another easily to facilitate better customer service for its guests. However, the resort's voice communications system held the business back from achieving this goal.

For instance, if a guest needed fresh linens, resort staff would either have to wait for the housekeepers to return to the main office at the end of their shift or have them pick up their messages in between cleaning floors, or send someone to hand-deliver the message. And a hotel manager who wanted to schedule a limousine for a guest would have to find a hotel phone and then hope that the valet was at his desk. This communications kludge resulted in the potential for delayed customer service.

To speed communications, the resort considered supplying cell phones to the staff or allowing them to use their own phones and then reimburse them. However, resort executives worried that trying to track employees' cell phone numbers and ensuring they weren't using the phones to call outside of the hotel was too much of a management and financial burden. They also realized that users would be operating on disparate systems with no common directory or voicemail, so they wouldn't be able to easily contact one another or be alerted to messages.

Instead, resort executives turned to a wireless integration solution from Sprint that allowed them to solve all of these challenges at once. They provided service staff, including housekeepers and hotel managers, with secure mobile phones that link into the resort's PBX. Now staff can place and receive four-digit calls as well as access a centralized voice mailbox that includes messages for their mobile and desk phones without draining minutes. The solution enables staff to alert one another to guest needs even if they are away from their desks. In addition, managers can set policies that block users from making outside calls.

Sprint

PRODUCTIVITY BOOST

Michael Ladam, the program manager for Business Communications Services at Frost & Sullivan's Stratecast division, says he sees more organizations like this turning to integrated solutions to get out of the rabbit hole they've created with voice communications. "Separate landline and mobile phone numbers and mailboxes make it more difficult for colleagues to reach workers quickly and for workers to keep track of their messages," Ladam explains.

In addition, this management of dual systems is costly for companies. "Some companies are treating the financial and productivity inefficiencies of separate mobile and direct phones as a necessary evil, but they're not looking at the bigger picture," he says.

Wireless integration offers companies of all sizes whose employees do a mix of desktop and mobile work—such as first responders, sales forces and field technicians—a way to improve communications, boost productivity and reduce management headaches.

"Fewer and fewer people are sitting at their desks, yet companies are placing a higher premium on communications. People need a way to reach each other through a single interface without increasing management, Ladam says. "When workers on the road can easily be accessed by customers and co-workers, then you provide richer information, and knowledge flows throughout your organization," he says. Ladam adds that compliance will also be a driver for melding enterprise and mobile voice systems, because companies will need to be able to log and audit employees' desktop and mobile call activity.

BENEFITS ABOUND

While some companies are worried they'll have to overhaul their entire voice strategy to achieve these goals, Dan Jacobson, portfolio manager for fixed mobile convergence solutions at Sprint, says Sprint Wireless Integration benefits enterprises in three key areas: lower cost, ability to use and possibly reduce existing infrastructure, and increased productivity.

"Sprint Wireless Integration provides additional telecom cost savings because mobile calls routed to and from the customer's premise-based PBX are considered 'on-net' and don't incur mobile usage charges," Jacobson says. Mobile-to-international calls also can be routed through the customer's PBX or international VPN, resulting in significantly reduced rates. In addition, enterprises can set up policies that limit who can call where and when on the mobile device, so they don't wind up with surprise charges each month.

For one transportation company, it wasn't just the call savings that interested it in wireless integration; it was the need to reduce telecom infrastructure costs. The company wanted to eliminate PBX hardware at its branch offices so on-site maintenance would not be needed at each location. Using Sprint Wireless Integration, the transportation company has been able to drop from more than one hundred PBXes to a couple dozen—an 80% reduction—without losing any functionality for those branch office users. In addition, the company was able to manage enterprise-wide adds, moves and changes from a central console attached to its main PBX.

Companies have also seen infrastructure savings by being able to eliminate desktop phones for users who are mostly mobile, while still providing desktop phone features as well as access to a centralized voice mailbox. For instance, insurance claims adjusters who spend the majority of their time in the field can be assigned a company Direct Dial-in identification number through the PBX that is instantly routed to their mobile device. When they call a customer via their mobile phone, caller ID and dial-back will show the corporate number instead of their mobile number.

"Some companies are treating the financial and productivity inefficiencies of separate mobile and direct phones as a necessary evil, but they're not looking at the bigger picture."

–Michael Ladam, Program Manager, Business Communications Services, Frost & Sullivan Stratecast Division

By slimming down desk phones, an organization can also reduce the number of PBX trunks it needs on-site and the complexity of managing a voice network. For instance, a company can roll its Sprint services, including MPLS and wireless integration, into a single bill to save time and money for the billing team.

One of the greatest benefits of wireless integration is the ability to connect employees and customers quickly, regardless of the voice communications channel they are using. For instance, companies can use the service to ensure that customers always reach a representative by transparently dialing through various mobile numbers until someone answers. Also, employees can use the seamless transfer function to swap between their desk and mobile phones during a conference call without having to drop off and dial back in. Further, employees no longer need to hover within earshot of their offices to avoid missing business-critical calls. With wireless integration, calls ring simultaneously to their mobile and desk phones.

All of these features help users maintain a strong connection to the office and their customers, according to Ladam. "Wireless integration is a great way to eliminate the confusion that can arise from multiple voice systems," he says.

GETTING STARTED

To determine whether Sprint Wireless Integration is right for your enterprise, Jacobson recommends using Sprint's services, which help you determine the total cost of ownership of your desktop and mobile environments. "We'll look at what you're spending today and what you'll save on trunking and other areas. Then you can move on to a productivity assessment," he says. With Sprint Wireless Integration, you'll see an immediate decrease in your voice communications spend. Contact a Sprint representative today to find out the cost efficiencies and productivity improvements that await you.

Sandra Gittlen is a Massachusetts-based technology writer and former senior editor at Network World.

Learn more about what Sprint can do for your business.
Visit: www.sprint.com/business

Continued from page 23

systems, it has also upended vendor business models by shaving lucrative hardware margins and opening the market to new competitors.

Traditionally, tags have been provided by milk machine manufacturers. "They've started selling systems with the $3 [industry-standard RFID] tags, but they hate it because profit margins went from 90% to zero," says Steve Eicker, vice president of Valley Agricultural Software (VAS), a maker of dairy management software in Tulare, Calif. "The new tags are a commodity."

Thomas Farms has been using electronic tags to help manage dairy operations since 1987. The dairy first deployed electronic ID tags to identify cows and monitor feed consumption. Today, it uses collar-mounted transponders from milk machine manufacturer BouMatic LLC that act as ID tags and pedometers. "We use that [pedometer data] to tell if a cow is in heat or sick. If she's overly active, she could be ready to breed," Wilson says.

The milking system identifies the cow, measures milk weight and other data, and pushes it into a VAS DairyComp 305 dairy management system in the back office. That system matches up the data with veterinary visits, vaccinations and other information for every animal and issues reports and to-do lists.

Wilson's one complaint is the cost of the tags, which, at $115 per collar, add up quickly in a 400-cow herd. "If you find a cow running around without her collar, you start running around looking for it," she says.

But costs are dropping like cow pies. The USDA is pushing, but has not yet required, standard RFID tags for tracking purposes. BouMatic's proprietary transponder tags, which are read as each cow enters the milking parlor, do not comply with the USDA's standards. But both farmers and vendors believe that standard tags will eventually be required. So Hanford, Calif.-based John Visser Dairy — with 16,000 cows in four locations — was one of the first to transition to a new BouMatic system that uses ISO-standard RFID tags. These are sourced from All-Flex USA Inc., a major tag producer.

"We expanded our herd and didn't want to spend more money for the big transponders *and* [standard] RFID tags," says Visser Dairy general manager Brian Schaap. Although BouMatic transponders cost $25 each, Schaap is paying just $2.50 per RFID tag, and the USDA-compliant tags are saving thousands of dollars in sensor-tag costs.

COW TECHNOLOGY

REAR LEG

In some cases, cows with RFID ear tags have a second chip implanted in a rear leg. This lets one person with a mobile wand reader scan the cow and perform other tasks such as vaccinations, which usually require access to the rear of the animal. If the cow has only an ear chip, one person scans the animal while a second person performs the task.

STOMACH

Bolus sensors that monitor a cow's heart rate, stomach PH, and body temperature or movement may be inserted into the cow's stomach. Information from the bolus may be transmitted to a repeater in the pen, which relays data to a base station in an office. Alternately, data may be gathered by an RFID reader in a pen or milking-parlor gate. The data gathered is integrated with the back-end dairy management system.

EARS

RFID tags attached to each cow's ear are read when the animal passes through the milking-parlor gate, or they may be read by workers carrying mobile wand readers. The cow's identification, along with milk volume and other data gathered by the milking machine, is passed automatically to the dairy management software in the back office.

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Multiple Piercings?

"Almost everything we do with a dairy cow, we do from the back," says Steve Eicker, vice president of Valley Agricultural Software, a maker of dairy management software.

But current government specifications call for RFID tags to be placed on the ear.

So because tags are cheap, some farms are experimenting with a second tag implanted in the rear leg as a complement to the one on the ear. That would make it possible for vaccinations and other jobs that happen at the animal's rear end to be performed by just one person.

It also gives each cow two unique numbers, one recognized by the USDA and a second that must be tracked and matched up by the dairy management software.

– ROBERT L. MITCHELL

RFID ROUNDUP

Schaap also uses those same RFID tags outside of the milking parlor, where about half of dairy farm labor costs are incurred. Herdsmen now use HP iPaq Pocket PC handheld computers and scanning wands with DairyComp to identify animals that need various services. The 3-foot orange wands read the tag on each cow's ear and transmit the ID number to the handheld via Bluetooth wireless technology. As each cow is scanned, the iPaq checks the ID number against a work list. It then sends an audio message to a Bluetooth headset, telling the worker what the cow needs, such as a vaccination

or a pregnancy check. At the end of the day, workers put the iPaqs into docking stations that upload the data to the dairy management system by way of a USB or Wi-Fi connection. The system improves accuracy and saves labor by allowing one person to perform tasks that previously required two or three people, says Schaap.

Bluetooth was the real breakthrough in that system, not the RFID tags, Eicker says. Older systems required workers to bring a laptop into the barn and use a wand connected by a long cable to read the ID tags. "If you've been around cows, the word for that is *stupid*," he says.

The government's 15-digit bovine ID standard and the ISO-compliant RFID tags provided a common identification technology that is lowering costs, Eicker says, but "Bluetooth was the technology that got rid of the wires and broke this open."

Technology also plays a key role in feed management. At Diamond S Ranch in Waterford, Calif., manager Tom Sawyer uses iPaqs and Wi-Fi links to monitor the feed mix provided to about 1,300 cows. "We feed for performance. That's where the money is," Sawyer says.

Cows that are at the peak of their lactation cycles and are producing more milk get more-expensive feed. Others get a less-expensive mix. Each recipe has a combination of four ingredients that are loaded into a mixing wagon. An HP iPaq computer interfaces with a scale in the wagon and displays on an LCD panel which ingredients to add and when to stop. The iPaq is also used for data entry, and all feed purchases are time- and date-stamped as they arrive.

As workers load the wagon, the data is transmitted via Wi-Fi to a server in the office running EZfeed, a feed management system from DHI Computing Service Inc. in Provo, Utah, that integrates with the ranch's dairy management software. Using the tool, Sawyer can precisely allocate rations, and he knows what he has in inventory and how much money is tied up in feed at any given time.

"From the standpoint of watching the bottom line, it is the most valuable program I have," he says. "Income above feed costs is the name of this game," he adds, noting that using a feed management system has resulted in a 10% reduction in money spent on feed.

BOVINE BIOMETRICS

Pedometers have been in use for years, and some farms are experimenting with other biometric sensors as well.

"Technology for monitoring heart rate, PH of the stomach and temperature of the cow on a real-time basis represents some exciting opportunities for earlier detection of problems," says Dairy Strategies' Smith.

TenXsys Inc., which made its name building telemetry devices for the space program, is in the process of launching a temperature sensor called SmartBolus that's designed to sit harmlessly in a cow's first stomach. The battery-powered pill-shaped device, which is 4.3 in. long and has a diameter of 1.3 in., lasts about four years. (It can't be removed; when power runs out, another is introduced.)

It takes temperature readings and uses a transponder to transmit that data 96 times a day to a solar-powered repeater in the corral. The repeater relays the readings to a PC in the office, and the data is integrated with a DHI dairy management program called DHI-Plus.

Bella Health Systems LLC in Greeley, Colo., is working on a similar system that uses a passive RFID tag to log the temperature when a cow passes by a reader gate in the pen or milking parlor.

These devices can detect a cow in heat and can help with early detection of pregnancy or illness, particularly after calving, when cows are susceptible to infections that can delay their return to milk production. Scott Cockroft, owner of Cockroft Dairy in Kersey, Colo., and vice president of Bella Health, says early detection can reduce the time it takes to recover from an illness from a week or more to as little as two or three days.

The usefulness of these types of sensors remains unproven, says Jim Reynolds, a clinician in the School of Veterinary Medicine at the University of California, Davis. Historically, temperature sensors have not worked very well because of animal temperature variations, he says. Cows allow their temperature to rise and fall with environmental conditions, and the temperature in the stomach can quickly change when a cow drinks. The systems need to take such variables into account to avoid false alarms, Reynolds explains. Nonetheless, he says the technologies have great potential.

Despite the uncertainties, technology is moving ahead in the dairy industry. Sawyer sees adaptation to high-tech ways as a maturing process, particularly as dairies get bigger. "All of these things are a natural," he says. "To do a top job, you have to rely on technology to assist you and get attention to the cows that need it."

At Fair Oaks Farm in Fair Oaks, Ind., manager Tom Sarosy is already mining operational data in new ways. "I'm constantly looking at it to see if there's a weak spot," he says.

On the other hand, Sarosy says, dairy farms could suffer from information overload if the number of IT systems and sensors — and the amount of data they produce — keeps increasing.

Creating lists of cows that might have problems based on biometric readings could become a distraction. The danger, says Sarosy, is that sensors "shift the focus to the technology instead of the cows." ■

Cows:

On big farms with multiple sites, it can be hard to keep track of what's going on. At John Visser Dairy, which has 16,000 cows across four locations, Frank Cordoza uses digital video cameras to watch what his bovines are up to. Each camera has a unique IP address and is connected to a LAN on each farm, and each LAN is connected to the Internet via a wireless network.

Using a browser, Cordoza can remotely access any camera to see what's happening. For example, when the dairy management system gives him daily reports on the health and productivity of the animals, he can double-check with his own eyes. "If I see something [in a report] that's out of whack," he says, "I go to the monitor, and I'm able to view it right then and there."

– ROBERT L. MITCHELL

Great Gadgets for The Digital Nomad

If your workspaces include airports, hotel lobbies and coffee shops, these devices can help. By Brian Nadel

Zagg's InvisibleShield covers are precision-cut for a wide variety of mobile devices.

WHEN YOU'RE on the road, you can't call upon the resources that officebound employees enjoy. But whether your temporary workspace is a table at Starbucks, a hotel lobby, an airport or a client's lunchroom, you've still got to get the work done.

Any gear that you lug around has to be small, light and reliable. Here are some great gadgets that any digital nomad will want to consider.

PRINT SHOP TO GO

Forget about waiting at a Kinko's to print that hard-copy report. Planon's Printstik PS910 is a go-anywhere print shop. It weighs just 1.5 lb., is powered by a lithium-ion battery and fits easily into a notebook bag, yet it can print from a smart phone, handheld or notebook, either through a USB cable or wirelessly via Bluetooth.

The $300 printer uses thermal technology; a package of three rolls of thermal paper costs $25. That means you get only monochrome documents, but if you really need a quick sales letter, a map or a proposal, the Printstik could be invaluable.

POWER CENTRAL

So much work, so few power outlets — it's the nomad's constant dilemma. To the rescue: Belkin's Mini Surge Protector with USB Charger. It turns a single AC outlet into three, delivering electricity to you and those around you. (Sharing that outlet may get you good karma, or even a free latte.) It also provides a pair of USB ports for charging phones, handhelds or media players. And it rotates so that it won't block the second outlet on the wall.

▲ Belkin's Mini Surge Protector with USB Charger

The Mini Surge Protector weighs just 6 oz., but it packs a powerful punch when it comes to saving batteries. The device costs $25 but is well worth it — not the least because it carries a $75,000 warranty against damage from a power spike.

CLEAN MACHINE

It may not be able to stop a coffee cup from tipping over, but Zagg's InvisibleShield keyboard cover can keep a spill from turning into a digital disaster. Made of an ultrathin plastic film, the type-through cover keeps liquids, dust and who knows what else out of your notebook's delicate keyboard. When it gets dirty, just wipe it clean. The $35 cover has been precision-cut for a wide variety of notebooks and comes with a lifetime guarantee that it won't scratch or wear out.

◀ Planon's Printstik PS910

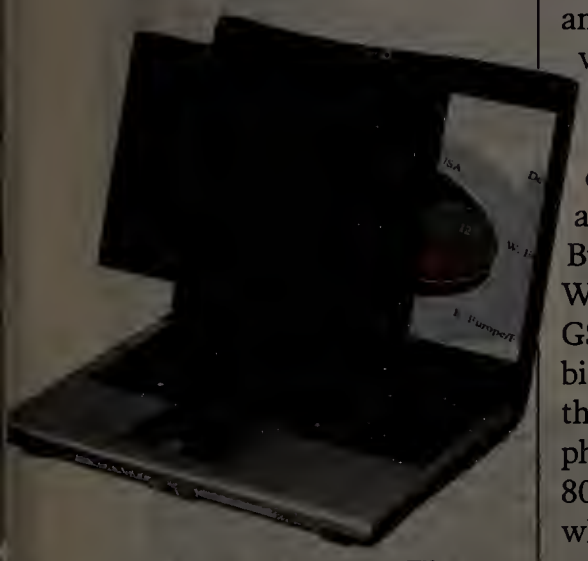
LEAN AND GREEN

Why spend valuable work time searching in vain for an AC outlet when the sun can power your phone or other equipment? The Solio Magnesium Edition portable solar charger from Better Energy Systems has three photovoltaic solar panels that slide out to provide a total of up to 9 watts of power. This will give you 15 minutes of cell phone talk time for every hour in the sun.

Solio Magnesium's charger comes with a USB adapter tip, plus you get a coupon for another tip of your choice from iGo.com. If you'd rather carry your solar power on your back, you can get Voltaic's solar backpack for $249. It puts out 4 watts of juice, has its own battery and comes with 11 power tips so it's sure to fit your equipment.

KEEPING SECRETS

The Fellowes Privacy Filter is essential equipment for mobile workers trying to keep secrets. Whether the sensitive document is a spreadsheet for your company's upcoming IPO or the private portion of a friend's Facebook page, this monitor filter will prevent most bystanders from seeing what's on your screen. Only those looking straight at the screen can see anything, so digital



▲ The Fellowes Privacy Filter

◀ Livescribe's Pulse Smartpen

Peeping Toms peering sideways over your shoulder will see only a black screen. Available for 12.1- to 15.4-in. displays, the filter costs about $35.

WRITE ON

When recording a meeting and taking notes is not enough, Livescribe's Pulse Smartpen lets you do both by linking your handwritten notes to what was said "live." The Pulse Smartpen includes an audio recorder that can play back exactly what was said when you press the pen to any place in your notes. The only catch is that you need to use one of Livescribe's special 100-page notebooks; a four-pack costs $20.

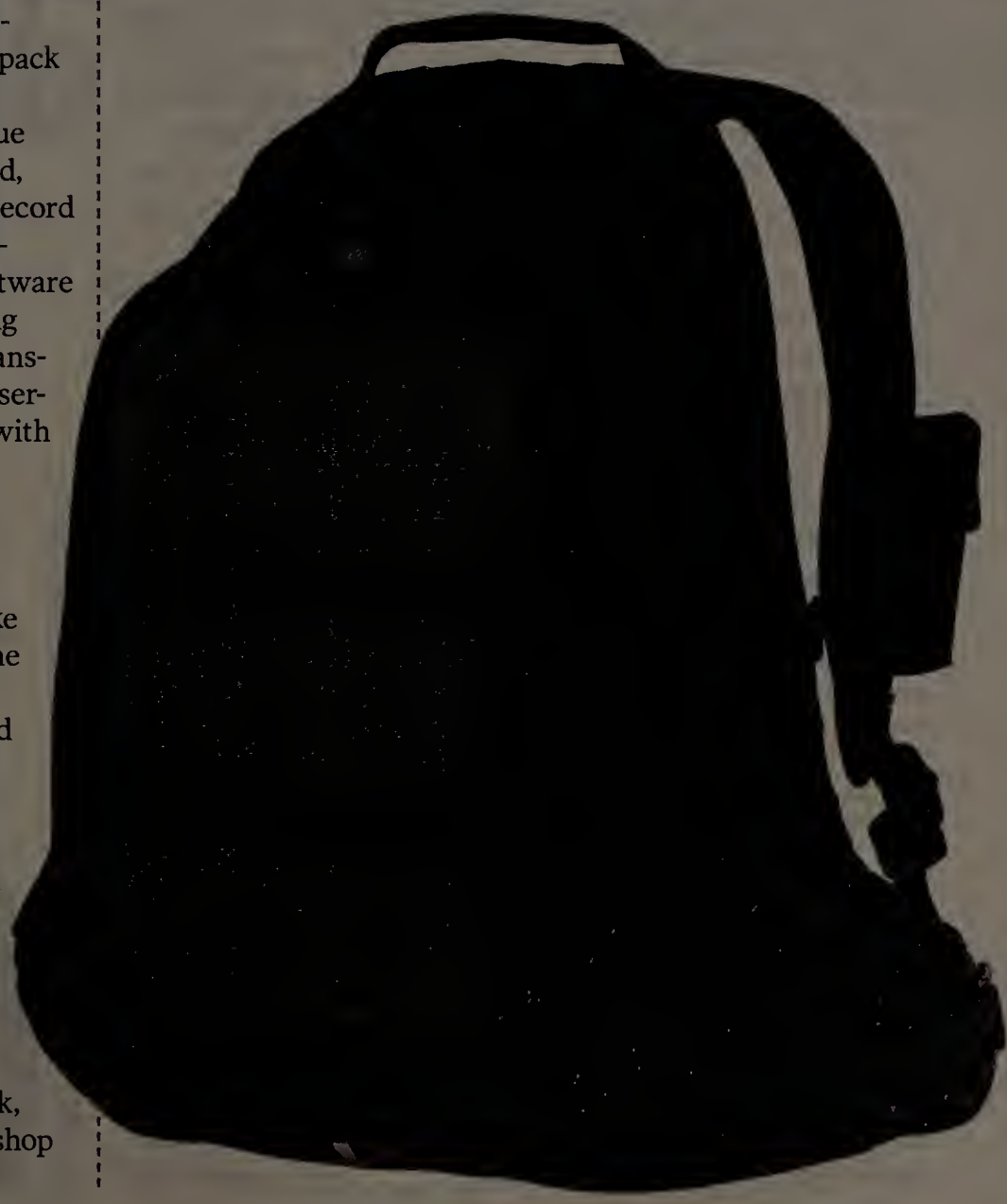
The $150 charcoal blue pen looks and feels good, weighs 1.3 oz. and can record up to 200 hours of note-taking activity. The software puts it all together, along with cool apps like a translator and transcription service, but it works only with Windows computers.

A GOOD CALL

HP's iPaq 910 Business Messenger may look like an ordinary smart phone with a screen on top and a thumb keyboard below for tapping out e-mails, quick memos and instant messages. But beyond calling and Web surfing over a 3G GSM quad-band mobile phone network, this 5.3-oz. smart phone can link with an 802.11b/g Wi-Fi network, whether it's at a coffee shop or a client's office.

▲ The Solio Magnesium portable solar charger

▼ Voltaic's solar backpack



▲ IOGear's GearJuice

Other features include built-in Google Maps with multimodal GPS navigation, mobile versions of various Microsoft apps and an alphanumeric QWERTY keyboard. The iPaq 910 costs about $500.

MAKE THE CONNECTION

Never seem to have the right cable — or is it always buried in the bottomless pit of your notebook bag? Meritline's Ultimate Cable Kit ($26) can help you make the connection with retractable FireWire, USB, telephone and Ethernet cables and all the adapter tips needed to plug just about any peripheral into your computer. It all fits into a black padded travel case and comes with a travel mouse and headphones.

For those who never seem to have the right AC adapter, IOGear's GearJuice ($40) can charge up just about any phone, anywhere. The kit includes a power adapter and seven tips that work with an assortment of popular cell phones, media players and handhelds.

BIZ FLICKS

When it's time to pop a video clip into a presentation, onto your blog or up on YouTube, Pure Digital's Flip Mino does the trick. A mighty mite of a camcorder, Mino weighs 3.3 oz., but it can capture a whole hour of TV-quality clips on 640-by-480-resolution video at 30 frames a second. For those in a hurry (and what digital nomad isn't?), the $180 Mino can transfer clips directly to online video services such as AOL Video, YouTube and MySpaceTV. And if you're really in a hurry, you can buy an "action mount" that lets you attach the camera to your handlebars or helmet.

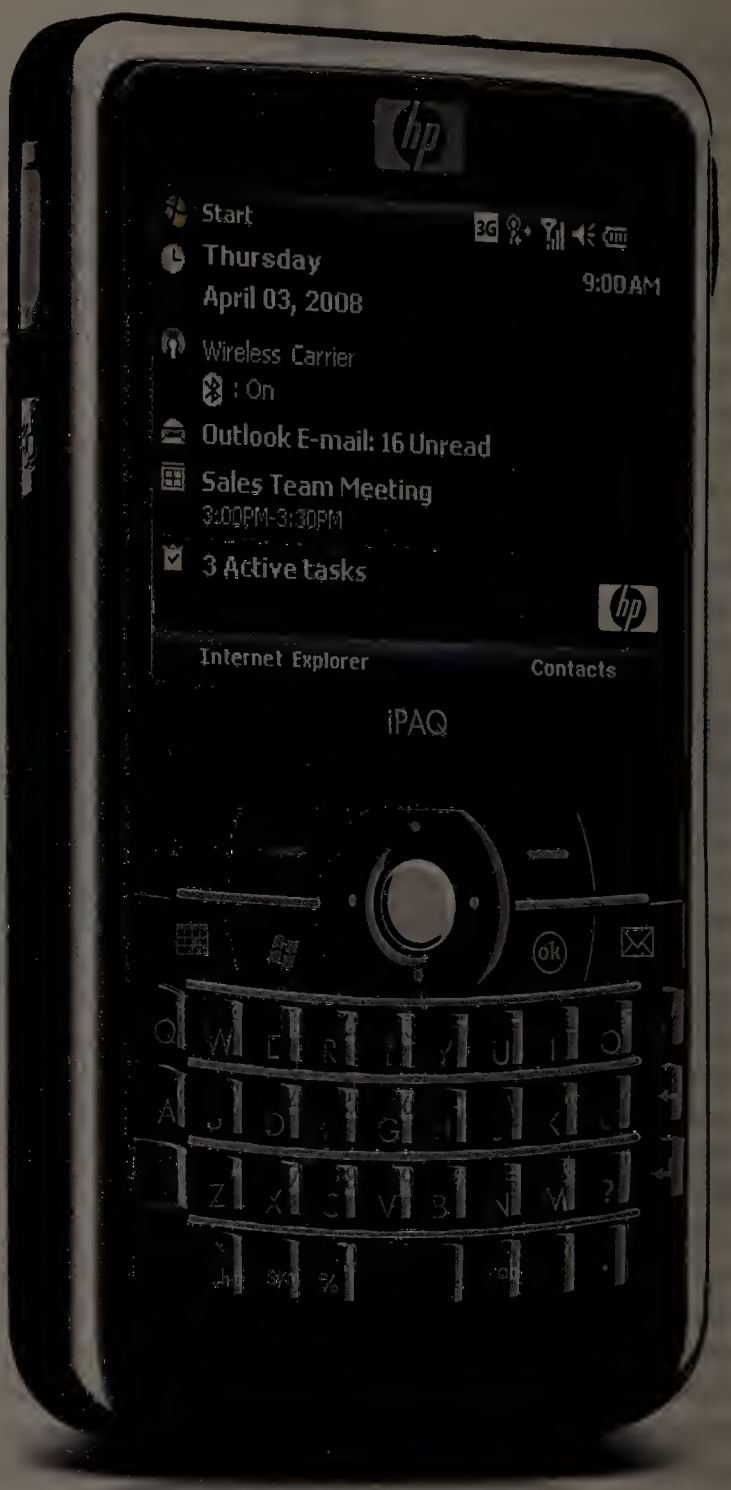
Pinching pennies? The Mino is actually at the head of the Flip class. To save a few bucks, opt for the slightly less sleek $150 Flip Ultra or the basic $130 Flip Video.

BUY THEIR SILENCE

Nomads need to work wherever and whenever they can, but the world is a noisy place. Aliph's Jawbone Bluetooth headset uses advanced digital signal processing technology to block out the racket going on around you and let your voice shine through during phone calls. It can't silence crying babies, traffic sounds or ringing phones on your end, but the people on the other end of the call won't hear them.

Lighter and smaller than other headsets, the latest version of the $130 Jawbone weighs one-third of an ounce. And it's stylish, too, with a leather-covered ear loop and a variety of finishes. ■

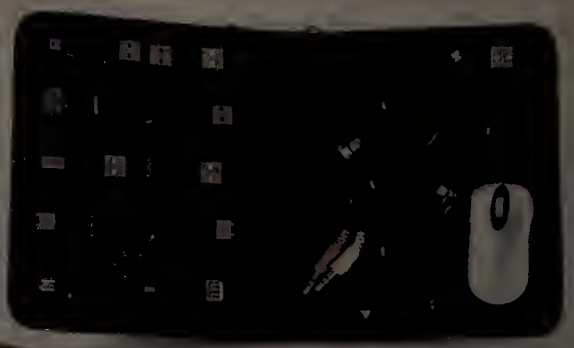
Nadel *is a freelance writer based near New York and is the former editor in chief of* Mobile Computing & Communications *magazine.*



▲ HP's iPaq 910 Business Messenger

▲ Pure Digital's Flip Mino

Meritline's Ultimate Cable Kit ▶



▼ Aliph's Jawbone Bluetooth headset

Project: Dream Job

Use your project management skills to land that prime position.

By Mary K. Pratt

PROJECT MANAGEMENT SKILLS produce results. As a former project manager, Joe Ruck knows that. And he knows that those same skills that produce corporate results are also personal assets.

The discipline that brings in a major IT project on time can also guide personal projects such as the search for a new job.

"Project management is going to improve your odds at getting a better job at better pay," says Ruck, who is now CEO of BoardVantage Inc., a Menlo Park, Calif.-based provider of secure portals and communications for boards and executives.

In fact, Ruck says a colleague who recently launched a job search landed a better position using project management skills that helped him to stay on track and avoid jumping at early offers.

Here are some tips gleaned from project management to help you successfully bring in that all important job project:

1 SET PROJECT OBJECTIVES.

One of the key concepts from project management is to define what success looks like. So start by articulating your vision of the job you want.

"Sit down in an organized way and examine where you've been. Think through the kinds of work you've done in the past five to 10 years, what you enjoy most and get the most meaning from, and why. That's a great way to make decisions about where you want to go next," says John A. Challenger, CEO of outplacement consulting firm Challenger, Gray & Christmas Inc. in Chicago.

> **"Project management is going to improve your odds at getting a better job at better pay.**
>
> **JOE RUCK,** CEO, BOARDVANTAGE INC., AND A FORMER PROJECT MANAGER

As in any project, lean on your team. Get input from those close to you who can give you objective insights to those questions.

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2 ESTABLISH A PROJECT TIMELINE AND MILESTONES. Every IT project has an implementation schedule and a delivery date. Your job search should have those too, says Karyl K. Innis, chairman and CEO of The Innis Co., a Dallas consulting firm.

Granted, you can't guarantee the start date of a yet-to-be-found job, but Innis says most people have a target date in mind. For example, you may want to land a new position in advance of expected changes at your current job or before your severance money runs out.

Once you commit to that time frame, establish some milestones. Schedule dates for tasks such as finishing your résumé and researching companies.

"You can build a schedule that will give you a sense of whether you're on track or not," Ruck says.

3 PLAN FOR CHANGES. All project managers encounter obstacles, so it's better to think early on, when you're objective, about which exigencies would make you revise your plan, says Dave Van De Voort, the Chicago-based principal consultant of IT functional effectiveness at global consulting firm Mercer LLC. For example, determine whether you'll compromise on location or pay demands if you don't get any offers. And figure out how long into the job search you'll wait before making those changes.

4 PREPARE, THEN IMPLEMENT. Consider your most valuable skills and your place in the current market. Spruce up your résumé and write cover letters. Make a list of the recruiters, search firms, colleagues and personal networks — including on LinkedIn and other online social networks — that can help you reach your goal. Determine which Web sites and job banks you'll search for leads. Compile lists of companies where you might want to work and the roles you would seek, then narrow them down, focusing on those that would fit best.

Then move into the next phase: implementation. Make those calls and line up those meetings, confident that you're on the right track.

"You place the phone calls to those on your target list, and you'll know what you'll say because you've prepared that script," says Innis, who has managed large-scale and global projects for tech companies such as Motorola Inc.

5 DOCUMENT PROGRESS. Successful project managers document their plans and their progress. You should be just as diligent in your job-search project, says Van De Voort, who has taught project-management-related courses at Ohio State University and the Graduate School of Business at Capital University in Columbus, Ohio.

Documenting your work helps you keep track of what you've done, what you're committed to and what you need to follow up on — important points that can easily get lost in the shuffle when you're already working a full-time job or, conversely, unemployed and out of your regular daily routine.

The epoxy
for the modern
IT executive.

Documenting your steps also helps you measure your progress against your timeline, Van De Voort says.

Adds Challenger, "Documentation is so important, because you can use it to hold yourself accountable. It makes you do the work."

6 REVIEW AND MANAGE CHANGE. Review your progress regularly, says Scott McMillan, the New York-based chief people officer at Capgemini in North America, who as a former IT consultant managed various projects. Look at what you've done, prepare for the next steps, and ask whether you're still on track or need to adjust your plans or objectives.

Don't be surprised if you sometimes find yourself off track; all projects have at least some slippage. When your project slips, figure out why, Innis says.

Good documentation helps you do that: You can track trends, like lots of first interviews but no callbacks. When you see a negative trend, ask your team of trusted advisers to help you determine why it's happening.

Adjust your project plans, timeline or objective based on what you learn, using the criteria for change management that you established at the onset of the project.

7 PERFORM A POST-MORTEM. Your work on your job search isn't done when you land that dream job. "When all is said and done, it's good to evaluate how it all went and prepare yourself for the next time around," Van De Voort says, "because in the reality of today's world, there will likely be a next time." ■ **Pratt** *is a* Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

Project in Peril

Here are six slip-ups to avoid in your job search project:

- **Setting unrealistic expectations** – on anything from how quickly contacts will return your calls to how big a salary you can command.
- **Being too narrow in your search.** Don't target only U.S. companies and overlook foreign businesses with U.S. operations.
- **Working too few regular hours on the job search project.** Cruising the Internet and networking at lunch every now and then just isn't enough.
- **Failing to get an honest, objective review of your résumé.** Everyone needs an editor.
- **Stalling at the initial steps.** Don't spend too much time on introspection. It can lead to analysis paralysis.
- **Taking too long to respond to potential leads.** Employers aren't going to wait for your phone call.

– MARY K. PRATT

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A Major Project Slips Through the Cracks

Every project is supposed to **involve security** early on. So how did **a virtualization effort** get so far without it?

ONCE AGAIN, I'm the bad guy.

A large-scale virtualization project was about to be deployed when the project team showed up seeking my sign-off. I can't approve anything without a proper assessment, so I told them I'd need two weeks. Naturally, the IT guys weren't too thrilled. But I've sent the word out to everyone before: Pull security into every project early on, or live with last-minute delays.

Because it had become clear to me that just delivering that message (even doing it dozens of times) wasn't enough, I managed a few months ago to have security embedded into the project life-cycle management process. We even have a new online project management tool to ensure that every step of every project is properly completed. Unfortunately, several projects that were already in progress were "grandfathered" in and therefore weren't being tracked online. One of these was server virtualization.

This is a huge project, involving the virtualization of some 250 critical servers. You'd think I would have heard something about it before now. Well, chalk this lapse up to efficiency and competence. As big as the project is, very few meetings were needed. That's because IT had run a trial about a year and a half ago, virtualizing just a handful of servers. That went well, and so the team was able to just scale up that earlier effort to enter the virtualization big time.

So I have my two weeks, but at this point, I have no choice but to compromise on several issues. One problem is that moving to a virtual environment involves taking an image of each server. That precludes what would have been a great opportunity for increasing our security. A lot of our Windows servers aren't up to date with patches. That's because we lack development environments for many of our applications, and adding patches without testing first is just asking for trouble. The image-transfer method robs us of a chance to take care of the problem; once those virtual servers are up and running, they will be just as problematic to patch as the old physical servers.

■ At this point, I have no choice but to compromise on several issues.

Another opportunity lost: We could have used the move to virtualization to properly segment our network, which currently is basically flat. You don't get many windows to address a problem like that. Now, instead of improving the situation, I am left worried that by moving our servers to this new environment, we will be introducing new attack vectors.

These are the sorts of things we could have talked over if I had been involved earlier. At least the number of grandfathered projects is shrinking; eventually, everything will be tracked online.

I don't really have time to do the assessment, what with my involvement in ensuring that our recent acquisitions meet our security requirements. Anyway, I'm not a VMware security expert, and I don't have the time to become one. Finally, for such a major infrastructure change, it's probably best to bring in a disinterested third party to provide an unbiased perspective.

CALLING THE EXPERT

With all that in mind, I gave a consultant a call. Every security manager should have on speed dial a couple of people he trusts who have expertise in certain core areas. During a recent M&A assessment, this consultant performed a thorough evaluation of an acquired company's virtualization infrastructure.

He assured me that his skills were updated and that he was ready to go. I briefed him on the scope of the assessment, and he prepared a statement of work. Within a week, he was on-site, conducting meetings, obtaining access to the various pieces of infrastructure and conducting tests to provide me with a meaningful review. I expect his report soon. ■

This week's journal is written by a real security manager, ***"Mathias Thurman,"*** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

Trouble Ticket

ISSUE: 250 servers are about to be virtualized.

ACTION PLAN: Call in an expert to assess as much of the project as possible before it goes live.

JOIN IN
To join in the discussions about security, go to **computerworld.com/blogs/security**

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OPINION

Preston Gralla

Don't Bet It All on Google Chrome

I THINK THAT Google's much-ballyhooed new Web browser, Chrome, is aimed at helping people surf the Web? Think again.

The browser instead takes dead aim at Microsoft Office and Microsoft Exchange. If Google has its way, your enterprise will use Chrome as a platform for Web-based applications from Google. You'll abandon Office, Outlook and others, and you'll bid Microsoft goodbye.

Any surfing you do with it, from Google's point of view, is pure gravy.

Even though the world has greeted Chrome as a consumer-level browser, Google didn't conceive of it that way. In a blog post on the company's Web site, Sundar Pichai, vice president of product management, and Linus Upson, engineering director, made no bones about what Google wanted to do when it designed Chrome:

"We realized that the Web had evolved from mainly simple text pages to rich, interactive applications and that we needed to completely rethink the browser. What we really needed was not just a browser, but also a modern platform for Web pages and applications, and that's what we set out to build."

To that end, Chrome is the first browser built from the ground up for a world in which the browser is an enterprise front end for Web-based applications and services such as Google Docs and Gmail.

Chrome is designed to work mostly with AJAX and Web 2.0 applications. Google built its own JavaScript virtual machine, called V8, for running JavaScript. In addition, each tab in Chrome runs as a separate browser, so that if one tab gets busy, bogs down or crashes, it won't affect the other tabs. And Chrome comes equipped with Google Gears, a kind of glue for binding Web-based applications to your hard disk.

■ With Chrome, Google is selling a proposition: Give up Microsoft for Google. But should you buy?

Chrome even includes features that make it appear as if Web-based applications are really software running on your own PC. You can create desktop shortcuts to Web applications that, when double-clicked on, run in a special window that has no browser controls — no tabs, buttons or address bar. All you see is the application itself, as if it were a desktop application.

Google hopes that once enterprises use Chrome as a platform, they will abandon desktop-based applications for Web-based ones and desert Microsoft Office and Exchange for Google Docs and Gmail.

So it's clear that with Chrome, Google is selling a proposition: Give up Microsoft for Google. But should you buy?

The answer is not yet, not by a long shot.

Chrome itself is still an early beta product. Given Google's tendency to keep its software and services in beta for years — Gmail is still in beta, and it was launched in 2004 — don't expect it to come out of beta for a while.

In addition, Google Docs simply isn't up to the standards of Office. It's rudimentary and lacks too many features. And the Web itself still isn't fast or reliable enough for corporations to give up Office. Beyond that, there are training, deployment, stability and management issues. And many enterprises have standardized on Internet Explorer and use ActiveX controls, which Chrome doesn't support. Abandoning all that would take an enormous amount of time and resources.

Microsoft also has a long, proven track record with enterprises. Google, as of yet, doesn't.

Robert Fort, CIO at Virgin Entertainment Group, summed up the problem: "I give Google all the credit in the world for innovative solutions, but to Microsoft's credit, they've got a lot more of an enterprise attitude."

Fort is right. So it's a good idea to give Chrome a test-drive. But as new and shiny as the browser may be, it's not yet time to bet the enterprise on it. ■

Preston Gralla *is a* Computerworld *contributing editor and the author of more than 35 books, including* How the Internet Works *and* Windows Vista in a Nutshell. *Contact him at preston@gralla.com.*

Career Watch

Spotlight on the IT Workforce

The numbers aren't adding up. Hundreds of thousands of jobs are expected to open up in the technology sphere in the next decade, but not nearly enough new workers are lining up to step into those positions. We asked two industry leaders to address this looming shortfall, and they responded with very different ideas. But you don't have to choose one over the other. Both of these approaches, as well as others, could help address this workforce crisis.

Companies Can't Afford to Lose Their Best IT Pros

THE DEMAND for IT professionals with suitable skills continues to be high, even with the threat of recession. In fact, "attracting, developing and retaining IT professionals" replaced "IT and business alignment" as the top concern for IT executives in last year's Society for Information Management survey of key IT trends. In an industry whose long-term annual turnover has typically been over 20%, a thoughtful retention strategy is essential for every IT organization.

The turnover of skilled IT professionals is very expensive and disruptive. Recruiting isn't cheap. Advertising, interviewing and training all cost money. Less obvious is the productivity impact; the new hire has to climb the learning curve, and the company-specific knowledge held by the departed professional is lost forever.

JERRY LUFTMAN

So, how do you retain the IT professionals you have? Offering a good salary is a start, but there are other key factors.

Most important is open and honest communication, followed by good worker-supervisor relationships. IT professionals like to be asked for their input and to feel that they influence IT-related decisions. They want respect and recognition from their supervisors, and they want to be appreciated as valued members of the organization. The top priority for organizations should be creating a challenging work environment by leveraging new technologies, demanding creativity in addressing complex IT issues and providing access to continuous learning, all while opening the communication lines.

Another important factor is autonomy and flexibility. Rapid change in technology requires constant updating of skills, and companies that provide training can benefit in two ways: They ensure that their IT professionals are prepared to apply emerging technologies effectively to meet business demands, and they signal to staffers that they are interested in advancing their careers. That's important because IT professionals who feel that there is no opportunity for career advancement are sure to look for greener pastures, regardless of how much you're paying them. Providing a balanced education program that includes business/management, industry, and interpersonal/communication skills is fundamental.

Another consideration is work/life balance. Giving IT professionals flexibility in their work schedules, the ability to work from home, desirable amenities, greater benefits, and generous vacation and holiday packages goes a long way toward enhancing morale. Organizations must anticipate the needs of IT professionals and proactively address them.

The pipeline of IT professionals with the appropriate balance of skills is falling short of demand. If you don't want to find yourself scrambling to maintain effective staffing levels, you should be doing all you can to keep your current workers happy, motivated, prepared and fulfilled.

— **Jerry Luftman,** *a former CIO, is associate dean and a distinguished professor for the graduate IS programs at Stevens Institute of Technology. He can be reached at jerry.luftman@stevens.edu.*

Let the Kids Do It: Bringing A New Generation to IT

co-founder Sergey Brin can spare $5 million to have a space adventure, I am willing to bet that someone out there will invest $1 million in a new idea to prime the pump on the future of the IT workforce.

I'm not criticizing anyone's private spending but simply wish to remind everyone of this critical yet unmet priority.

PHIL BOND

According to the Department of Labor, America will add nearly 1.5 million IT jobs between 2006 and 2016. Meanwhile, undergraduate degree production in the computer sciences was down 20% in 2006-07, the most recent academic year for which we have data. Past attempts at promoting the IT profession have yielded little improvement.

If adults have failed, why not let the kids go at it? Give them the facts, and offer a $1 million prize for the best effort to persuade students to study math and science. Whoever makes the most convincing case that these academic paths prepare people to help better the world and to lead positive, fulfilling lives wins. The only requirement would be the use of online video or other Web 2.0 technologies to get the message out.

The buzz caused by such a prize could be the launching pad for a bigger Web 2.0-style campaign. By targeting both new media outlets like Facebook and older media like newspapers and TV, the campaign would reach a wide variety of people, from parents, teachers and guidance counselors to all those bright young students pondering their futures.

The need for a new approach is obvious. The question is, Who will step up? It does seem that if there's a market for $5 million joy rides in space, it may not be too lofty a goal to find a donor who recognizes that a million bucks is a small price to pay to avoid a million-worker shortfall.

— **Phil Bond** *is president of the Information Technology Association of America. He can be reached at pbond@itaa.org.*

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Shark Tank

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Requirements

New office space is carved out of a big mechanical room on the 12th floor of this hospital wing, and it's really out of the way – the elevators for people only go up to the 11th floor. But that's a minor annoyance to this networking pilot fish. "Hospital cabling standards are no copper Ethernet between floors, fiber only," he grumbles. "Not only was the rule violated, but the copper that went to the floor below was not properly secured, had no service loop on the 12th floor and had no strain relief at the floor level. And there's no slack for anything new going above the ceiling – like air conditioning ductwork – if there are more renovations. And to add insult to injury, the new office's bathroom is wheelchair-accessible, approximately 160 square feet. Remember, no elevator access. . . ."

How It's Done

Pilot fish with lots of tech know-how and a fresh set of certifications gets a job doing IT support at a fashion retail company. "On my third day of work, we got a ticket for a user whose mouse didn't work," fish says. "I didn't think much of it, but my boss told me to grab a mouse and follow him." At the user's desk, fish can't believe his eyes as the user demonstrates the problem by moving the mouse wildly around on her desk – mouse pad and all. But his boss calms her down, then simply flips the mouse pad over so the rubber side is down and the smooth side is up. "At that point, I was expecting a 'duh,' " says fish. "But instead, my boss got a hug and a loud 'Thank you! You are so smart! I wish I understood these computers better!' It took everything in my power to not laugh out loud. I just bit my tongue and walked away. My boss later told me that it wasn't the first time he'd had that type of call in this building."

Job, Redefined

Flash back to the days of terminals connected to the mainframe by coaxial cable, and a pilot fish whose job is well defined – or so he thinks. "I worked for a company that had a very strict job responsibility structure," says fish. "If a task that needed doing was not in your job description, you *had* to call the person whose job it was. One morning, my manager called me into her office to diagnose a problem with her terminal. From the status line, it was obvious that it was no longer connected to the control unit. Since there was construction happening on the ground floor, I figured that the coax had been cut, so I told her that I would get Wally, whose job it was, to take a look at it. She fixed me with an icy stare and just said, 'Fix it!' So much for job descriptions."

■ *Sharky's job description includes getting you to send me your true tale of IT life at sharky@computerworld.com. You'll score a sharp Shark shirt if I use it.*

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■ FRANKLY SPEAKING

Frank Hayes

Um, What Noise?

THEY SAY that if you have a jackhammer operating nearby, the noise will be incredibly annoying at first, but as time goes by, you'll get used to that loud background noise. In time, you won't even hear it.

I'm writing this column with a jackhammer pounding on concrete 20 feet away. We'll see just how true that is.

In IT, we get used to background annoyances too. Temporary work-arounds become permanent. Rebooting to solve software problems becomes routine. Pidgin magic to handle flaky hardware is passed down from one systems administrator to another.

After a while, we don't think of those things as problems. We don't even notice them.

Know who does? New employees.

They're the ones who are astounded at what their co-workers put up with. They can't understand why all the old hands tolerate a kludgy procedure, why they're unfazed by a network that often suddenly stops responding, why they never, *ever* go near the online help system.

At least, they're astounded at first. Soon enough, they learn that the kludgy procedure is the one known-safe path through a minefield of legacy bugs. And that the network freezes at predictable times that are easy to work around. And that entering the help system wipes out all your current work.

And in short order, they'll be doing things the way everyone else does. They won't think of those once-astounding annoyances at all. They won't even notice.

And an opportunity for IT will be lost.

Every new hire is a fresh set of eyes. He sees the problems that everyone else ignores.

We can use that. But we have to get the timing right. It's not much good to ask a new employee about annoyances as soon as you set him up with his PC. Until he learns procedures and gets into the swing of things, he won't know how to answer.

■ Every new hire is a fresh set of eyes. He sees the problems that everyone else ignores. We can use that.

And after two or three months? By then, the new guy will have been assimilated into The Way We Do It Here. What was at first as jarring as jackhammer noise, he'll no longer notice.

But somewhere in between, there's a sweet spot. Use it.

About three weeks after setting up each new hire, send an IT support person to his desk for a chat and a "system checkup." Be sure to schedule it with the employee first. Sending along a standard checklist is probably a good idea too.

And make sure your support tech knows what to do: Ask how everything is working, if there are any problems and if there's anything IT-related that the employee doesn't understand. Take notes. Nod a lot. Smile. Don't try to explain anything; just listen and write, then do a quick check of the PC's software and hardware.

Some users won't say much. Others will complain about everything. But from the rest, you can gain useful intelligence about how your systems are actually working.

You'll find out that users are still taught to use work-arounds that are no longer necessary. You'll discover software and network glitches you thought were minor but actually cause users a lot of pain. You'll spot gaps in the way you train users. (You'll also discover what unauthorized software and hardware the user has smuggled in, but that's just a bonus.)

In short, you'll get the maximum benefit from that new hire — before he's blind and deaf to all those virtual jackhammers that everyone else ignores too.

As for my real jackhammer — well, after a few days of this, maybe I won't hear it either.

I'll be deaf. ■

Frank Hayes *is* Computerworld's *senior news columnist. Contact him at frank_hayes@computerworld.com.*

COMPUTERWORLD
BUSINESS INTELLIGENCE PERSPECTIVES

Best Practices IN BUSINESS INTELLIGENCE

AWARDS PROGRAM

Congratulations Award Recipients!

Business Intelligence Perspectives proudly announced the results of this year's "Best Practices in Business Intelligence" Awards Program. This program honors IT users "Best Practice" case studies selected from a field of qualified finalists.

Honoree Awards Recipients in each of the following categories were recognized at Business Intelligence Perspectives in Phoenix, Arizona, on September 10th:

Finalists in each of the following categories are:

Creating an Agile BI Infrastructure

Marriott International, Inc., Bethesda, Maryland

Finalists:
- Abbott International, Abbott Park, Illinois
- USPS IT Delivery and Retail Business Systems Portfolio, Washington, DC
- United Network of Organ Sharing, Richmond, Virginia
- USCG, Office of Performance Management and Decision Support, Washington, DC

Driving Process Management with BI

FedEx Services, Collierville, Tennessee

Finalists:
- New York City Department of Information Technology and Telecommunications, New York, New York
- The Salvation Army, USA Western Territory, Long Beach, California
- Schneider National Inc., Greenbay, Wisconsin
- Transportation Security Administration, Arlington, Virginia

Expediting Information Delivery, Retrieval, Reporting and Analysis

USPS IT Delivery and Retail Business Systems Portfolio, Washington, DC

Finalists:
- Airlines Reporting Corporation, Arlington, Virginia
- Corporate Express, Broomfield, Colorado
- Cox Enterprises, Inc., Atlanta, Georgia
- Hartford Hospital, Hartford, Connecticut

Innovation and Promise in Business Intelligence

GMAC Financial Services, Detroit, Michigan

Finalists:
- [illegible]
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Thank you to our "Best Practices in Business Intelligence" Judges for 2008:

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